WIENER STUDIEN ZUR TIBETOLOGIE UND BUDDHISMUSKUNDE
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STUDIES ON THE DOCTRINE OF *TRAIRŪPYA*

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Preliminary Remarks

The present study pursues two kinds of aims, one belonging to the history of philosophy and the other to hermeneutics.

On the one hand it is intended to elucidate a number of theoretical notions which play a central role in the Indian theories of inference and proof (*anumāna*) and to investigate in which way they are related to each other or how they can be brought into a systematic order. In particular, we will attempt to explicate possible meanings and to ascertain the import of the three conditions of a logical reason, called *Trairūpya*, as we find them formulated in a number of texts belonging to the historical period between Vasubandhu and Dharmakīrti. Furthermore, apart from assessing the theoretical status of the *Trairūpya*-doctrine it will be our task to explore the implicit conception of its role within the general framework of the theory of which the canon of *Trairūpya* forms a part and to get an idea of the nature of this general theory.

On the other hand, it is tried to demonstrate the utility of a hermeneutical maxim which, although not explicitly disputed, is often disregarded and which seems to possess special relevance in the field of logic and philosophy. It is the maxim not to impose ones conceptions about what should be more or less probable in the process of interpreting particular textual passages, even if such conceptions were to a relevant degree based on investigations of the same philosophical tradition or even the same texts. It is true that the alternative advocated here, namely of exploring *all* alternatives which are possible with regard to a certain set of criteria and eventually even stating these criteria explicitly tends to render the process of text-interpretation more complicated and tedious. But there are sufficiently strong reasons to assume that this disadvantage is not only compensated, but that in a number of cases it is imperative to accept the increase in complexity because this is the only way to meet certain important hermeneutical desiderata. The maxim of exploring in a systematical manner the totality of possible alternatives relative to some set of criteria is formal in so far as it does not include a specification of the content of the criteria. It *should*, however, be stated in this formal way because we *must* leave room for the possibility that the nature of the criteria might differ in different cases and in particular differ relative to the sort of texts and the pursued hermeneutical aims. Nevertheless, in the case of philosophical texts and specifically of treatises dealing with logic in the broader sense of the term there are contexts where it is appropriate to specify the relevant criterion as the literal meaning or the linguistic sense of formulations. This means that the exploration of possible interpretations has to rely on nothing but the restrictions imposed by the specific grammatical rules of a particular language applied to a particular formulation found in some text (or group of texts).

Although emphasis is laid thereby on the literal meaning of formulations this must in no way be taken to imply that the range of possible interpretations is defined by the application of linguistic-grammatical rules alone. On the contrary, we will assert that the view that the final interpretation has to be obtained by derivations using only linguistic-transformational rules in combination with substitutions of definitional equivalents imposes excessive restrictions and leads in some

cases to unacceptable results. The investigation on the *Nyāyapraveśa* of B. Gillon/ M. Lile Love 1980 in all probability exhibits the fault of an inappropriate application of deducing interpretations with the help of linguistic rules. Their interpretation of the import of the *Trairūpya*-conditions of the *Nyāyapraveśa* totally ignores the possibility that a philosophical theorem is not represented in full explicitness by formulations encountered in a text and that accordingly not only linguistic rules but also certain "pragmatic" considerations must be applied in order to derive the relevant theorem from the formulation. It should be noted that this does not necessarily mean that the formulation in question is defective or inadequate. For such a view would have to rely on a very narrow conception of adequacy according to which adequacy includes absolute explicitness and a formulation is adequate only if it does not also exploit non-linguistic means of expression. But irrespective of whether or not a hypostatization of that narrow adequacy-concept might be justifiable, text-interpretation, if it wants to rely on realistic principles, must account for the possibility that also other than linguistic-grammatical rules in the strict sense of the term are brought into play in order to convey thoughts. This holds good also in the case of formulations occurring in philosophical texts in relation to philosophical theorems. Alternatively, one can also say that interpretation of philosophical texts must take into account that the vehicles which convey philosophical theorems and doctrines are not linguistic entities like strings of words, sentences or concatenations of sentences, but facts, namely facts of the form that such and such concatenation of expressions possessing such and such linguistic meaning is/has been used by such and such person(s) under such and such circumstances in such and such a context.

On the one hand we claim that philosophical theorems are not always derivable by applying only grammatical rules of interpretation to formulations occurring in texts, but on the other hand we advocate the thesis that in the field of philosophy and logic in particular it is of foremost importance to pay attention to the exact wording exhibited by certain formulations. This means that in this field any paraphrases which alter the linguistic sense of original formulations should rely on conscious and preferably also explicitly and exactly formulated principles warranting the deviations. This is by no means always done. For example, in R. Hayes 1980 a list of three criteria for valid logical reasons is presented which deviates in some significant respect from formulations of the *Trairūpya*-canon encountered in a number of passages of texts written by Dignāga and other authors. According to Hayes the three criteria, as (allegedly) reformulated by Dignāga, run as follows:

Criterion One: The evidence must be a property of the object of inference.

Criterion Two: The evidence must be known to occur in at least one other locus (i.e. other than the object of inference) in which the argued property occurs.

Criterion Three: The evidence must not be known to occur in any other locus in which the argued property is absent.

— cf. R. Hayes 1980:230 and 233.

The significant feature lies in the occurrence of the epistemic element '(to be) known (to)' in the formulations of the conditions two and three. It is not

exhibited by a number of formulations of the three conditions of a logical reason as they are represented in the theory of *Trairūpya*. In particular, no epistemic element occurs in the formulation of the *Trairūpya*-conditions in *Pramāṇasamuccaya* II, 5cd, a textual passage which is deemed as one of the most prominent representatives of the *Trairūpya*-doctrine of Dignāga's period. But in all probability the difference between the formulation of *Pramāṇasamuccaya* II, 5cd as well as other texts and the description of three criteria of logical reasons given by Hayes is not one which deserves to be neglected.

This holds good even if Hayes' depiction should correctly represent *some* view which the author of the *Pramāṇasamuccaya* held regarding the acceptability of logical reasons. For, first of all, the circumstance that some author might have regarded conditions, as they are formulated in Hayes' criteria, as requirements for the acceptability of logical reasons does not entail that all formulations of acceptability-conditions must have the same import as the former ones. It is unwarranted to derive the latter from the former because one can not *a priori* rule out the possibility that some formulations are *intended* to represent weaker requirements than those embodied in other formulations or than those which *could* be maintained. The minimum one has to do in order to be justified in making this derivation would be to give reasons which rule out the possibility that in some instances only necessary and not both necessary and sufficient conditions are at stake. Secondly, and this is perhaps even more important, we must allow for the possibility that changes in the perspective of viewing a subject-matter take place which are not consciously realized and explicitly acknowledged by some author. Therefore, even if one encountered different kinds of formulations in the context of the same subject-matter, it would not be automatically justified to treat them alike or run them together. This holds good also in the case of epistemic and non-epistemic versions of *Trairūpya*. The change in the formulations could very well reflect a shift in the perspective. If we do not take the exact wording seriously and slur over distinctions of formulations from the very start, we deprive ourselves of any chance to detect more subtle, but possibly theoretically highly significant differences of perspective. Since in the field of philosophy and logic the potential importance of variations of this kind is very high, it is not only justifiable, but even required to accept that in this way one can be led to take into account possibilities which were not envisaged as distinctive alternatives by the authors of the interpreted texts.

The maxim to take differences of formulations seriously in order to detect variations of viewpoint is defensible also in cases where it results in envisaging possibilities which do not conform to any intention of some interpreted author. The reason is that even if some perspectives have not been adopted by an author or even in a whole tradition, the viewpoints in question might constitute *objectively* possible ways of looking upon some subject-matter. Accordingly, in the case of treatises on theory of inference, if the procedure of exploring in a systematical manner the range of possible imports of certain formulations does not *recover* views which have been held in this area, it still opens the possibility to *discover* aspects which the field of Indian Logic actually possesses. This might be generalized and one can say that any method of exploring alternatives fulfilling *some* criteria which

temporarily abstracts from considerations of probabilities is better suited than the alternative of restricting possibilities also by probability-preconceptions from the very start in order to detect perspectives which objectively inhere in some subject-matter.

Admittedly, certain "political" assumptions about the aims of Oriental Studies and explorations of foreign cultural traditions must be conceded for the acceptance that the discovery of objectively grounded perspectives also represents a value. We regard the enterprise of systematical investigations of alternative possibilities inherent in texts belonging to foreign cultural traditions or in the traditions themselves as valuable even in abstraction from historical faithfulness, because we advocate the view that the aims and functions of Oriental Studies are not *exhausted* by the task of retrieving ancient documents and the *re*discovery of thoughts and ideas. A *further* aim lies in achieving a more comprehensive and more adequate view of certain areas. Our contention is that investigations of foreign cultural traditions also serve the purpose of enriching *our* perspectives with regard to particular subject-matters, and possibly Oriental Studies could even aim at the still more ambitious objective of providing us with entirely new outlooks of history and society as well as conceptions of life. However, there would not be the slightest chance of fulfilling any of the more ambitious purposes, if the objective of studying documents of foreign cultures is artificially restricted to reconstruction and at best rediscovery.

This does not in any way mean that it should be acceptable to leave the viewpoint of historical faithfulness out of consideration. It still remains bad methodology if constructions are passed off as reconstructions and if possibilities discovered as inhering in some subject-matter were treated as if they represented actually held views. The position that explorations of documents of foreign cultural traditions serve both the purpose of recovery and discovery is compatible with the thesis that the tasks of retrieving and of constructing have to be clearly differentiated.

Still, there might be a hierarchic relationship between the values of recovery and discovery in so far as the latter constitutes a foundation of the former. It could not implausibly be argued after all that our modern historical and philological methods obtain their value from the fact that, by being designed for the purpose of objective reconstructions of the past, they promote the *discovery* of facts which are new for *us*. They impose effective restrictions preventing one from reconstructing historical events according to initial expectations and by obstructing historical accounts corresponding to preformed probability-conceptions they enhance the chance of discovering what is unexpected and has not yet been conceived. The inherent potency of compelling the user to envisage possibilities which are new and unfamiliar to *him* and to revise his preconceptions characterize the modern historical and philological methods in contradistinction to certain hermeneutical principles implicitly hypostatized by commentators belonging to the Indian tradition, and one could claim that it is precisely this feature which constitutes the most decisive aspect of a superiority of the modern methodology.

Thus the value of historical objectivity *must* not be regarded as irreducible; it *can* be viewed as derived from the value of enriching and broadening our

outlooks and perspectives. Therefore no compelling reason should exist that once we have been led with the help of our historical methods to previously unknown territories we must only follow paths already trodden by the respective historical tradition. This by itself does of course not yet guarantee that we will encounter treasures of lasting value when we step on land not previously walked on. However, what matters is the fact that we increase the chances of making relevant discoveries if we are prepared to depart from the trodden areas within the territories which we enter by the study of foreign cultural traditions.

The present treatise on the theory of *Trairūpya* is based on a selection of a number of relevant textual passages. The main sources are 1) Vasubandhu's *Vādavidhi*, 2) Śaṅkarasvāmin's *Nyāyapraveśa*, 3) Uddyotakara's *Nyāyavārttika*, 4) Dignāga's *Nyāyamukha* and *Pramāṇasamuccaya*, 5) Praśastapāda's *Padārthadharmasaṃgraha* or *Praśastapādabhāṣya* and 6) the logical texts of Dharmakīrti, in particular the first chapter of the *Pramāṇavārttika*. (The sequence reflects the order of occurrence in our investigation, and of course not the historical order). Obviously this does not at all cover all the material which could be exploited for a historical study of the *Trairūpya*-doctrine. Nevertheless, the selection should comprise enough representative material for investigating the most relevant varieties of the *Trairūpya*-theory, for exploring their theoretical status and clarifying their relation to other logical concepts as well as the character of the theoretical framework which suits them. Corresponding to these aims the present study contains five main parts. The initial three parts deal with three groups of concepts and theorems, the first part with the idea of invariable concomitance (*avinābhāva*), a notion which is clearly expressed in Vasubandhu's *Vādavidhi*, the second part with one variety of *Trairūpya*, which is characterized by the non-occurrence of epistemic elements within the *Trairūpya*-conditions, the third part with another variety representing the epistemic counterpart of the former. The fourth section is dedicated to the exploration of the systematic relationship between all these ideas and notions, whereas the last part is an appendix which contains a short discussion of some features of Dharmakīrti's theory of inference and presents it as embodying an alternative account of *Trairūpya* as well as its relation to the idea of *avinābhāva* and of a problem that is involved in this latter notion, namely the problem as to how knowledge of universal propositions of the form '$(x)(Fx \rightarrow Gx)$' = "All Fs are Gs" is possible.

PART I

AVINĀBHĀVA

The inseparable connection

In the *Vādavidhi*, a treatise which is ascribed to the famous Buddhist dogmatist and logician Vasubandhu, we find definitions which suggest that their creator regarded some kind of inseparable connection as a (n at least) necessary condition for the correctness of a logical reason. The following two are the most important ones in the present context:

Def.I *tādṛgavinābhāvidharmopadarśanaṃ hetuḥ*
"The (logical) reason is the pronouncement of a property which does not occur without a such (=which is inseparably connected with a *probandum*)."[1]

Def.II *nāntarīyakārthadarśanam tadvido 'numānam*
"Inference is the observation of an object not occurring without [the *probandum*] for someone who knows that."[2]

Both the linguistic form of these definitions and the subsequent comments on them in the text suggest that according to the author a prerequisite for the existence of a logical reason or an inference is that an entity has been mentioned or observed which fulfills the following condition: It never occurs that the entity in question exists somewhere but the thing which has to be proven or to be inferred does not exist at the same place. For after the definition of the logical reason (Def.I) the following explanation is given: "A thing which never occurs when such a [thing], i.e. [a thing] of the same kind as the thing which has to be proven, as e.g. the non-eternity of sound, does not exist is a property [3] which does not exist without a such, as e.g. [the property of] origination from effort [does not occur without] non-eternity and smoke [does not occur without] fire."[4]

In connection with the second definition the following explication exists: "An

[1] Cf. E. Frauwallner 1957:118 "Der Grund ist die Mitteilung einer Eigenschaft, welche mit einem solchen (zu Beweisenden) untrennbar verbunden ist."

[2] Cf. E.Frauwallner 1957:120 "Die Schlußfolgerung ist das Sehen eines notwendig verbundenen Gegenstandes für jemand, der das weiß."

[3] In Frauwallner's edition: *chos can*, but in Peking and Derge *chos* = *dharma* occurs.

[4] *Pramāṇasamuccayaṭīkā*, (Derge) f. 183b2-4 (= Peking f. 209a4) *don gaṅ sgra mi rtag pa ñid la sogs pa bsgrub par bya ba de ḥdra ba ste / deḥi rigs can med na don gaṅ źig ḥgar yaṅ ḥbyuṅ ba ma yin pa ste / rćol ba las byuṅ ba ñid ni mi rtag pa ñid lta bu daṅ du ba ni me lta buḥo źes pa de ni de ḥdra ba med na mi ḥbyuṅ baḥi chos (can) te /* — Cf. E.Frauwallner 1957:135. "Ein Gegenstand, welcher ohne einen solchen, d.h. einen derartigen zu beweisenden Gegenstand wie die Nichtewigkeit des Tones usw., niemals vorkommt, wie das durch eine Bemühung Entstandensein ohne die Nichtewigkeit oder der Rauch ohne das Feuer, das ist eine Eigenschaft, welche mit einem solchen untrennbar verbunden ist" (E.Frauwallner 1957:118-119).

object which does not occur in [case of] the non-existence of an [other] object is one that does not occur without [the thing to be inferred], as e.g. smoke with fire."[5]

Here we encounter expressions of the form: "A never occurs if/when B does not exist", "A never occurs in [case of] the non-existence of B". One might find these explanations unclear for the mere reason that the phrases 'A occurs if/when B exists', 'A occurs in [case of] the existence of B' (which occur as constituents of the above expressions) leave room for different interpretations. However, the linguistic form suggests that these formulations are meant to refer to the simultaneous occurrence at one particular location. Accordingly the phrase: 'A occurs if/when B exists' should be taken in the sense of: 'A and B occur (together) at the same spatio-temporal location', or more explicitly: 'There is a spatio-temporal position p such that both A and B occur at p'.

On the other hand, one finds the expression 'property' (*dharma*) in the first above-mentioned definition and the commentary mentions entities like 'the origination from effort' or 'non-eternity'. If we assume that the idioms in question are meant to state relations existing between properties it is also possible to regard the phrases as referring to the (numerical) identity of the property-bearer. In this case the expression 'A occurs if/when B exists' should be explicated as: 'A and B are properties of one and the same thing' or: 'There is a property-bearer x such that both A and B are properties of x'.

Anyway, the decisive point is that both explications possess an important formal analogy, *if* spatio-temporal positions and property-bearers are acknowledged as entities in the universe: The talk about the occurrence of something in case of the existence of something else refers to the fact that entities of a certain kind occur or are exemplified. Therefore the phrases 'A occurs if/when B exists' or 'A occurs in [case of] the existence of B' are in any case translatable into expressions of the form: '$(\exists x)(Fx \& Gx)$' (= "There is an x such that x is F and x is G"). 'Fx' and 'Gx' are to be substituted either by expressions of the form 'an A occurs in x'[6] or expressions of the form 'A is a property of x'. Under these circumstances it is natural to explicate the requirement of inseparable connection expressible by sentences of the form: 'A never occurs if/when B does not occur', 'A does not occur in [case of] the non-existence of B' or 'A never occurs without B' by the following formulations:

E1 There is no thing in which A occurs and B does not occur.

E2 There is no thing whose property is A and not B.

But since the formulation of Def I, even if not strictly by virtue of the meaning of the expressions alone, at least if pragmatic considerations are applied allows us to

[5] *Pramāṇasamuccayaṭīkā*, f. 105a2 *don gaṅ źig gaṅ med par mi ḥbyuṅ ba de ni deḥi med na mi ḥbyuṅ ba ste / dper na meḥi du ba lta buḥo //* — Cf. E.Frauwallner 1957:138. "Ein Gegenstand, der ohne einen anderen nicht vorkommt, ist notwendig damit verbunden, wie z.B. der Rauch mit dem Feuer" (E.Frauwallner 1957:121).

[6] 'an A occurs in x' is a one-place predicate and equivalent to: '$(\exists y)(Ay \& y$ occurs in $x)$' (= "There is a y such that y is A and y occurs in x").

infer that at least one of the relata of the inseparable connection should be a property there must be an adequate paraphrase of E1 which refers to properties. If we make the natural assumption that for the author of the text the inseparable connection holds between entities of the same type so that both relata have to be properties if one of them is we could give the following paraphrase:

E1* There is no thing in which a thing occurs whose property is A and in which no thing occurs whose property is B.

It is advisable, however, that we do not presuppose that only spatio-temporal locations could establish the inseparable connection indirectly by the occurrence of things exemplifying properties. After all it is well known from many sources of that time that material bodies and similar particulars have been regarded as property-bearers in the context of inferences, e.g. a particular mountain in the case of the inference from smoke to fire. Therefore the predicate 'x is located at y' should be introduced at this place as a term the meaning of which is given by the following definition:

Def1. 'x is located at y' $=_{def}$ '(x occurs in y and y is a spatio-temporal location) or ((x occurs at the same spatio-temporal location as y or x occurs in spatio-temporal proximity of y) and y is a spatio-temporally located particular)

This definition enables us to capture different possibilities regarding the nature of the co-occurrence that seem to be involved in the notion of inseparable connection: 1) the possibility that the co-occurring items inhere in the same particular and 2) the possibility that the co-occurring items are instantiated **α**) by different particulars occurring at the same place at the same time or **β**) by different particulars which both occur either at the same place and time as or close to another spatio-temporally located particular. The following definition of inseparable connection has good prospects of covering the intentions of Vasubandhu:

Def2. 'A is inseparably connected with B' $=_{def}$ 'Either there is no thing x such that A is property of x and B is not property of x or there is no thing x such that on the one hand an object is located at x of which it holds good that A is its property and on the other hand no object is located at x such that B is its property[7]

If we use quantifiers of standard-predicate calculus we can also write:

Def2* 'A is inseparably connected with B' $=_{def}$ -(∃x)(x exemplifies A & -x exemplifies B) ∨ -(∃x)[(∃y)(y exemplifies A & y is located at x) & -(∃y)(y exemplifies B & y is located at x)]

According to Def.I the property which is invariably connected with an other is the one the announcement of which functions as the (logical) reason in the context of

[7] This means that either every bearer of the property A is also a bearer of the property B or every bearer of the property A is such that there is also a bearer of the property B which possesses the same location as A.

a proof. Let us call it shortly 'the *probans*' and the property to be proven 'the *probandum*'. Accordingly, the definitions of the logical reason and of inference involve the following necessary condition: There must be no thing which possesses the *probans* and which does not possess the *probandum* or there is no thing in the vicinity of which a thing possessing the *probans* exists and in the vicinity of which no thing possessing the *probandum* exists. Let us use '*H*x' as an uninterpreted symbol and stipulate that 'x possesses the *probans*' and 'a thing is located at x that possesses the *probans*' are its admissible interpretations. Similarly let '*S*x' be a symbol which can be interpreted either as 'x possesses the *probandum*' or as 'a thing is located at x that possesses the *probandum*'. In this way we are able to formulate a necessary condition involved in the above cited definitions of the *Vādavidhi* as follows:

There is an admissible interpretation of the schema

NC: $-(\exists x)(Hx \;\&\; -Sx)$

which yields a true formula.

But **NC** is equivalent to:

NC*: $(x)(Hx \rightarrow Sx)$

as well as to:

NC:** $(x)(-Sx \rightarrow -Hx)$

Considering the fact that it is obviously presupposed that the logical reason must be instantiated in the subject of inference = *pakṣa* or that at least one instance has to exist where *probans* and *probandum* occur together, one should also take into account the possibility that an existential requirement regarding the exemplification of the *probans* (as well as the *probandum*) is involved. Therefore the following variation of **NC** is equally relevant:

NC_E: $-(\exists x)(Hx \;\&\; -Sx) \;\&\; (\exists x)(Hx)$[8]

But we can even go one step further because both interpretations are not independent of each other: If the formulae resulting from substitutions of '*H*x' by 'x possesses the *probans*' and of '*S*x' by 'x possesses the *probandum*' are true formulae resulting from substitutions of '*H*x' and '*S*x' by 'a thing is located at x that possesses the *probans*' and 'a thing is located at x that possesses the *probandum*' (= 'There is some y such that y is located at x and y possesses the *probans/pro-*

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[8] Of course the fact that **Def.I** and **Def.II** betray that the author of the *Vādavidhi* took it — at least in the present context — for granted that the logical reason is instantiated somewhere does not necessitate the consequence that the *relation* which is represented by the expressions *(tādṛg)avinābhāvi-* and *nāntarīyaka-* involves the co-occurrence of *probans* and *probandum* in some instance. It is possible that the semantic content of these terms was yet unspecified with respect to this requirement, i.e. Vasubandhu's notion of inseparable connection or invariable concomitance by itself neither implied nor excluded that some property/*dharma* must be instantiated in order to exhibit the relation. This sort of indeterminacy is not at all an uncommon feature of concepts. It is however surprising that investigations of terms and concepts, especially in the philological disciplines, hardly ever take notice of this phenomenon.

bandum') should be equally true. This is so because '(x)(Fx → Gx)' logically entails '(x)((∃y)(xRy & Fy) → (∃y)(xRy & Gy))', i.e. any interpretation of 'Fx', 'Gx' and 'xRy' under which '(x)(Fx → Hx)' is true makes also '(x)((∃y)(xRy & Fy) → (∃y)(xRy & Gy))' true.[9] Accordingly **NC**, **NC***, **NC**** and $\mathbf{NC_E}$ have to be true if one interprets '*H*x' by 'a thing is located at x that possesses the *probans*' and '*S*x' as 'a thing is located at x that possesses the *probandum*'. Therefore the propositions which can be expressed by '(x)(a thing is located at x that possesses the *probans* → a thing is located at x that possesses the *probandum*)', or, if we take $\mathbf{NC_E}$ as a basis, '(x)(a thing is located at x that possesses the *probans* → a thing is located at x that possesses the *probandum*) & (∃x)(a thing is located at x that possesses the *probans*)' represent minimal interpretations of the pertinent relation.

If we take the formulations of the *Vādavidhi* literally they seem to imply that the *dharma* technically called *liṅga* has to fulfill the requirement that whenever a thing exists which exemplifies in the above described direct or indirect manner this *dharma* the same entity has also to exemplify the *probandum* directly or indirectly. But even if we abstract from the issue that has been taken into consideration above, namely the question as to how the co-occurrence relation involved in the notion of inseparable connection as given in Def.I and Def.II was conceived, the explications given by the formulas **NC** and $\mathbf{NC_E}$ retain their relevance. This is due to the fact that the logical form exemplified by **NC** (**NC***, **NC****) and $\mathbf{NC_E}$ would not be changed if one hypostatized different notions of co-occurrence. In particular the assumption that the author of the *Vādavidhi* did not intend to allow for the indirect connection of co-occurrence which we did not rule out would only affect the way of the interpretation of the schematic letters '*H*' and '*S*'; i.e. in case the requirement of inseparable connection demands that the *probans* and the *probandum* be properties of the same substratum, '*H*x' would have to be read as 'x possesses the *probans*' and '*S*x' as 'x possesses the *probandum*' and the explications of **NC** and $\mathbf{NC_E}$ would continue to be valid.

As the pertinent connection of inseparable connection is described by the expression *avinābhāvi(n)* in Def.I of the *Vādavidhi*, we will from now on employ the term *avinābhāva* in order to refer to the relation characterized in **NC**. The use of the expressions *avinābhāva*-connection or *avinābhāva*-relation will be neutral regarding the alternative interpretations of '*H*x' and '*S*x' mentioned above.

As regards the relevance of the explication of the notion of inseparable connection for the doctrine of *Trairūpya* it is generated by the question as to whether the conditions of a logical reason laid down in this theory entail the *Vādavidhi*-condition or not. For in case they should not entail the latter this would be highly significant. The doctrine of *Trairūpya* has been commonly understood as a canon of criteria which enable us to filter out valid and correct logical reasons from invalid and incorrect ones (or conversely invalid from valid ones) so that it is

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[9] This follows simply from the fact that '(x)(Fx → Gx)' logically implies '(x)((Hx & Fx) → (Hx & Gx))' together with the entailment between '(x)(Fx → Gx)' and '(∃x)Fx → (∃x)Gx'. — The derivation requires only three steps: 1) (x)(Fx → Hx) = (y)(Fy → Hy), 2) (x)(y)((xRy & Fy) → (xRy & Gy)), 3) (x)((∃y)(xRy & Fy) → (∃y)(xRy & Gy)).

natural to expect that they entail the *Vādavidhi* condition if the latter constitutes, as it appears to be, a requirement for the correctness and validity of logical reasons used in a proof. Accordingly either the role commonly ascribed to the *Trairūpya* doctrine or the role assumed for the theorem of invariable concomitance or its proposed interpretation would be put into question in case it should turn out that the requirements laid down in the *Trairūpya*-theory do not include the condition put forward in the definitions of Vasubandhu's *Vādavidhi*.

We will first turn to a short treatise on the theory of inference and proof written some decades later than Vasubandhu's *Vādavidhi* — if the tradition is correct. It is the *Nyāyapraveśa* probably composed in the 6th century by a man named Śaṅkarasvāmin. There are a number of reasons for choosing this text as a starting point: 1. The text is not only preserved in Tibetan and Chinese translations but also in the original Sanskrit. This is an important advantage since it will emerge shortly that subtleties of formulation are highly relevant for the interpretation. 2. The treatise is short enough to make the interconnections between the doctrine of *Trairūpya* and other components of the theory of inference and proof clear. On the other hand the text is long and explicit enough to contain sufficient material for an interpretation of the theory of *Trairūpya*. 3. The treatise seems to have become very popular in the Indian tradition after its pubiication. This fact makes it probable that the *Nyāyapraveśa* had not only achieved authority but was also regarded as an authentical representative of (a certain stage in the development of) the theory of proof and inference. 4. It is almost certain that the *Nyāyapraveśa* was composed at the time of or soon after Dignāga. It is therefore reasonable to expect that the text represents the theory of proof and inference and the doctrine of *Trairūpya* in particular in a version which could be rightly called "classical".

PART II

REALISTIC VERSIONS OF *TRAIRŪPYA*

The theory of the *Nyāyapraveśa*

I

Almost at the beginning of the *Nyāyapraveśa* (NP) we find the following passage:

p.1,8[10] *hetus trirūpaḥ / kiṃ punas trairūpyam / pakṣadharmatvaṃ sapakṣe sattvaṃ vipakṣe cāsattvam iti / kaḥ punaḥ sapakṣaḥ / ko vā vipakṣa iti // sādhyadharmasāmānyena samāno 'rthaḥ sapakṣaḥ // tadyathā / anitye śabde sādhye ghaṭādir anityaḥ sapakṣaḥ // vipakṣo yatra sādhyaṃ nāsti // yan nityaṃ tad akṛtakaṃ dṛṣṭaṃ yathākāśam iti / tatra kṛtakatvaṃ prayatnānantarīyakatvaṃ vā sapakṣa evāsti vipakṣe nāsty eva / ity anityādau hetuḥ //*
"The reason is threefold. But what is the threefoldness? The being a *dharma* of the *pakṣa*, the being in the/a *sapakṣa* and the not being in the/a *vipakṣa*. "But what is the *sapakṣa*? Or what is the *vipakṣa*?" The/A *sapakṣa* is a thing which is similar by the similarity of the *dharma* [which is] to be proven. For example: If (the) sound has to be proven as non-eternal the non-eternal pot etc. is the *sapakṣa*. The *vipakṣa* is [that] where the [property/*dharma* which is] to be proven is not. What is eternal that is observed as [being] not-produced, as the ether, and since therefore (*iti*) producedness or [the property of] ensuing upon effort is only in the *sapakṣa* and is never in the *vipakṣa* it is a (correct logical) reason with respect to [something's being] impermanent etc."

It is immediately obvious that the conditions contained in the *Trairūpya*-doctrine go beyond the *Vādavidhi*-condition on account of the first mark alone, i.e. the condition of being a *dharma*/property of the *pakṣa*. The interpretation of this stipulation is relatively straightforward. In all probability it means that the logical reason has to be a property of that thing in respect of which it should be proven or inferred that it possesses the property which has to be proven or inferred. Therefore we must assume that Vasubandhu in the above cited definitions only wanted to state a necessary requirement for the correctness of a logical reason because it appears as good as certain that the author of the *Vādavidhi* regarded the requirement which is stipulated in the first mark of *Trairūpya* also as a precondition for the appropriateness of a *hetu*.[11]

[10] Page references of the *Nyāyapraveśa* refer to the edition of A.B.Dhruva 1968.

[11] Vasubandhu seems to have been familiar with some variant(s) of the *Trairūpya*-doctrine. In the *Vādavidhāna*, which is ascribed to the same author as the *Vādavidhi*, we find in the *vṛtti* a statement which comes close to the one we encounter in the *Nyāyapraveśa*, namely: *yo dharmaḥ pakṣasya sapakṣe siddho vipakṣe nāsti* — cf. E.Frauwallner 1933. Another version is to be found in a work called *Tarkaśāstra*, presumably written not much earlier than Vasubandhu's treatises — cf. E.Frauwallner 1957:143ff.

By this fact the possibility is ruled out that the complete set of the *Trairūpya* conditions is equivalent to the *Vādavidhi*-condition as explicated above. But it still remains open whether or not a subset of the former has the same import as the latter. In particular it is yet undecided whether the remaining conditions of *Trairūpya*, namely mark two and three, are equivalent to the inseparable connection mentioned in Vasubandhu's work.

We allowed for the possibility that the relation between the proving *dharma* and the *dharma* to be proven and the thing in which they are instantiated could be of an indirect kind in the case of an inseparable connection. This means that it would be possible that e.g. a particular mountain might be taken as an instance of co-occurrence between the genus 'smoke' and the genus 'fire' (the universal smoke-ness and the universal fire-ness) even if the two latter entities are conceived as inhering in something else than a mountain, as e.g. in an individual smoke and an individual fire. Such a conception should be ruled out by the formulation that a logical reason must be a property of the subject of inference = *pakṣa* if one takes it literally. Also the statement of NP 1,5 *tatra pakṣaḥ prasiddho dharmī prasiddha-viśeṣeṇa viśiṣṭatayā svayaṃ sādhyatvenepsitaḥ* = "Among these the *pakṣa* is a well-known property-bearer regarding which [the arguer] himself wishes to prove that it is qualified by a well-known property" suggests that a direct relation is pre-supposed between the quality that has to be proven and the instance of its occurrence. Nevertheless these facts are insufficient for proving a relevant difference between the *Vādavidhi* and the doctrine of *Trairūpya*. First of all, it has not been claimed as certain that the writer of the Vādavidhi was ready to permit indirect co-occurrence relations as described above. After all, Vasubandhu seems to have acknowledged a condition equivalent to the first mark of *Trairūpya*. Second, the occurrence of the formulation *pakṣadharmatvaṃ* in the NP alone does not prove much with respect to the conception presupposed by the writer of this work. It is not imperative to interpret *pakṣadharmatvaṃ* in the sense of "being a property of the *pakṣa*". It could also be taken to mean "being a property in the *pakṣa*", i.e. the fact that [the logical reason] occurs in the *pakṣa*, so that the question of the directness or indirectness of the relation between the property in question and the *pakṣa* is again open. It is true that the writer of the NP often cites examples where a direct connection between a property and its bearer is involved. However, he exemplifies the category of a fallacious reason called *saṃdigdhāsiddha* by a situation in which somebody intends to prove (the occurrence of) fire by pointing to a material aggregate of which it is uncertain whether it is smoke or not. This suggests that (also) entities like smoke or being smoke, and not (only) properties like possessing smoke or being a place of smoke which would be more directly related to a *pakṣa* like a particular mountain, are possible logical reasons. On the other hand, it is not clear how strictly the formulations should be taken and how significant the manner of the exposition is for the underlying conception. This is the more so because only the exemplification of a fallacious reason is at stake. The NP is probably too short to make a definite decision regarding this point possible. Moreover, it is not entirely sure that there actually *is* something that *could* be decided because it is by no means certain that the author of the NP was aware of the pertinent differences and had a clear and definite view concerning the exact

nature of the relationship between *pakṣa* and the *dharmas* playing the role of *probans* and *probandum* in inferences and proofs.

Being unable to make a definite decision regarding the question as to whether there is a theoretical difference between the notion of inseparable connection mentioned in the *Vādavidhi* and the doctrine of *Trairūpya* as conceived in the NP regarding the required degree of directness of the relation between *dharmas* and instances of their occurrence we still face the problem whether, in case there were no differences concerning this point, the conditions two and three of *Trairūpya* would be equivalent to the *avinābhāva*-relation. Now, it seems that even then the assumption of an equivalence between the conjunction of the conditions two and three of *Trairūpya* and the *avinābhāva*-relation of the *Vādavidhi* is definitely untenable. For the second condition appears to have an existential import which was not involved in our first explication of the inseparable connection. If the phrase *sapakṣe sattvam* = "the being in the *sapakṣa*" is read in a natural way, it carries the implication that the proving *dharma*, the *hetu*, exists or occurs in that which is designated by the term *sapakṣa*. This alone suffices to render the set of conditions two and three considerably stronger than the condition formulated by **NC**: $(x)(Hx \rightarrow Sx)$. But this raises the question as to whether we should rather amend our explication of the inseparable condition of the *Vādavidhi*, in particular, whether **NC** should be replaced by an exegesis using an expression of the form: '$(x)(Hx \rightarrow Sx)$ & $(\exists x)$...x...' or, more specifically, by $\mathbf{NC_{E}}$.

Some lines after the first statement of the *Trairūpya*-conditions in the NP, we find a formulation which appears similar to the conditions two and three of the first formulation. It reads: ....*sapakṣa evāsti vipakṣe nāsty eva*...., which we translated above as: "....is only in the *sapakṣa* and is never in the *vipakṣa*....". Here *sapakṣa* occurs together with the particle *eva* which we translated by 'only' and is often rendered in this way. The formulation with *eva* or 'only' *could* indeed be taken as not involving an existential proposition. After all, it has been sometimes claimed by linguists that 'only'-sentences, like

(1) Only students got a reduction.

is by virtue of its meaning equivalent to a universally quantified proposition where a conditional is in the scope of a universal quantifier. Accordingly, the meaning of (1) could be represented by:

(x)(x got a reduction → x was a student).

The fact that assertions made by (1) generally convey that (the speaker thinks that) there were some students which got a reduction would be explained as a pragmatic implicature of a *statement* of (1), but it would not form part of the sentence-meaning. But does this prove that at least the variant with *eva* represents a condition which does not include an existential proposition? Such a conclusion would be rash. The reason is that there is no justification for the tenet that a theorem of a philosophical author must be identical with the meaning of some sentence or collection of sentences occurring in his works. More specifically, there seems to be no warrant for the assumption that the theorems which constitute the *Trairūpya*-doctrine are always identical with something which is expressed by certain sentences by virtue of their linguistic meaning alone and that they cannot also consist in "pragmatic implicatures" conveyed by some linguistic expressions. This

principle of text-interpretation is highly important although it is unfortunately often disregarded.[12]

The necessity to take into account the possibility that the linguistic sense of expressions even if combined with the identification of the referents of indexical elements or the completion of syntactical ellipses does not yet convey the full import holds good also in the case of the explications given for the technical terms *sapakṣa* and *vipakṣa*.

We can gather from the text of the NP that a *sapakṣa* is any thing whatsoever which is similar by virtue of the fact that it exhibits the property/*dharma* to be proven, and it seems that we have to add: similar to the *pakṣa*, the subject of proof, *in so far as it actually possesses the property the possession of which is at stake in an inference or proof*. A *vipakṣa*, on the other hand, should be something which does not exhibit the property to be proven or to be inferred. But it is natural to raise the question: Does this really hold good for *anything* whatsoever or rather for everything except the *pakṣa*? Accordingly, the problem arises to decide which of the following definitions of *sapakṣa* and *vipakṣa* would be correct:

Def 3.a) x is a *sapakṣa* $=_{def}$ x possesses the *dharma* to be proven
b) x is a *sapakṣa* $=_{def}$ x $\neq$ *pakṣa* & x possesses the *dharma* to be proven

Def 4.a) x is a *vipakṣa* $=_{def}$ x does not possess the *dharma* to be proven
b) x is a *vipakṣa* $=_{def}$ x $\neq$ *pakṣa* & x does not the *dharma* to be proven

According to Def 3.a) and Def 4.a) the domain of *sapakṣa(s)* and *vipakṣa(s)* would be "non-restricted" in the sense that the *pakṣa* itself could equally belong to these realms and would always necessarily belong to just one of these domains if it is presupposed that any thing either possesses or otherwise does not possess the *dharma* to be proven. In the following the terms 'restrictive' and 'not restrictive' (or 'non-restrictive') will be used in order to refer to conceptions of *sapakṣa* and *vipakṣa* which exclude or, respectively, do not exclude the *pakṣa* from their domains.

The number of possibilities increases as soon as the identification of the conditions involved in the "marks" two and three of *Trairūpya* is concerned.

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[12] Therefore the practice of B.S.Gillon and M.Lile Love 1980 used for the identification of the *Trairūpya*-conditions of the NP deserves to be looked at with greatest suspicion. The authors try to attain an explication of the three "marks" of a logical reason by the method of paraphrasing the linguistic expressions which seem to represent the pertinent conditions. On the surface this appears to be a methodologically strict and sound procedure. But since at least the doubt regarding the assumption that the relevant theorems are represented by virtue of linguistic meaning alone is justified the confidence of reaching an interpretation by sound methods is naive. This holds good at least as long as (like in the case of Gillon/Love) no clear criteria for the acceptability of different kinds of paraphrases are given and in practice only transformations are taken into account which are believed to preserve linguistic sense.

We will soon see that the explication of the import of the phrase *sapakṣa evāsti* given in Gillon/Love 1980 as '(x)(Hx → (Sx & x≠p)', i.e. "Everything which exhibits the proving property exhibits the property to be proven and is not identical with the *pakṣa*" is dubious, to say the very least.

With regard to the second condition of *Trairūpya* one has to take into account the formulations *sapakṣe sattvam* and ....*sapakṣa evāsti*. The expression *sapakṣe sattvam* obviously is a nominalization of an expression of the form ....*sapakṣe 'sti*. If we fill the empty place of the subject by an expression with the meaning 'the (logical) reason' we obtain the following paraphrases for the two formulations: a) The logical reason is/occurs in a *sapakṣa*, b) The logical reason is/occurs in the *sapakṣa* = The logical reason occurs in the realm of entities which are a *sapakṣa*, c) The logical reason is/occurs only in a *sapakṣa*, d) The logical reason is/occurs only in the *sapakṣa* = the realm of entities which are a *sapakṣa*. By this we have covered both the theoretical possibility that the term *sapakṣa* in the pertinent phrases pertains to individuals exhibiting the *dharma* to be proven and the possibility that the term designates the realm or the collection of entities which are *sapakṣas* according to the first use of the expression. Considering the two possibilities of interpreting the term *sapakṣa* mentioned above we obtain at least two alternative explications of the second mark of *Trairūpya* without *eva* and four explications of the formulation which contains *eva*. We must therefore reckon with the following possibilities:

Ex 1: There is an x such that x exhibits both the *dharma* to be proven and the proving *dharma*.

Ex 2: There is an x such that x is not identical with the *pakṣa* and x exhibits both the *dharma* to be proven and the proving *dharma*.

Ex 3: If anything exhibits the proving *dharma* at all it is something which also exhibits the *dharma* to be proven = Anything which exhibits the proving *dharma* exhibits the *dharma* to be proven.

Ex 4: If anything which is not identical with the *pakṣa* exhibits the proving *dharma* at all it is something which also exhibits the *dharma* to be proven = Anything which is not identical with the *pakṣa* and exhibits the proving *dharma* exhibits the *dharma* to be proven.

Ex 5: If anything exhibits the proving *dharma* it is something which also exhibits the *dharma* to be proven and there is something which exhibits the proving *dharma* and the *dharma* to be proven.

Ex 6: If anything which is not identical with the *pakṣa* exhibits the proving *dharma* it is something which also exhibits the *dharma* to be proven and there is something which is not identical with the *pakṣa* and which exhibits the proving *dharma* and the *dharma* to be proven.

Whereas Ex 1 and Ex 2 relate to the formulation without *eva* Ex 3-6 primarily relate to formulation containing this particle. Nonetheless it is possible to correlate any member of Ex 3-6 also to the statement at the beginning of the explanation of the three marks in the NP which does not contain *eva*. This possibility would be given especially if a contrastive stress on *sapakṣa* in NP 1,9 were assumed. For if we read *sapakṣe sattvaṃ vipakṣe cāsattvam* = "The being in the *sapakṣa* and/but the not being in the *vipakṣa*", the first member of the conjunction can be easily interpreted as equivalent to: "The being in the *sapakṣa* only".

Keeping in mind that the subscripts '$_{-eva}$' and '$_{+eva}$ indicate that the formulas correspond to the statements with and without *eva* according to their most natural readings we can give the following list of candidates for an explication of the *Trairūpya*-condition(s) referring to the occurrence in *sapakṣa*. As the problem of the ascertainment of the exact nature of the allowed forms of occurrence will not be relevant for the subsequent analyses, we will not use the italic letters '*H*' and '*S*' any more and follow the usual practice of writing 'Hx' for 'x exhibits the proving *dharma* = the *dharma* which plays the role of the indicator or *probans*' and 'Sx' for 'x exhibits the *dharma* to be proven = the *dharma* which plays the role of the *probandum*'; 'p' will be short for *pakṣa*:

$ES_{-eva}1$) $(\exists x)(Hx \,\&\, Sx)$

$ES_{-eva}2$) $(\exists x)(x \neq p \,\&\, (Hx \,\&\, Sx))$

$ES_{+eva}1$) $(x)(Hx \rightarrow Sx)$

$ES_{+eva}2$) $(x)((x \neq p \,\&\, Hx) \rightarrow Sx)$

$ES_{+eva}3$) $(x)(Hx \rightarrow Sx) \,\&\, (\exists x)(Hx \,\&\, Sx)$

$ES_{+eva}4$) $(x)((x \neq p \,\&\, Hx) \rightarrow Sx) \,\&\, (\exists x)(x \neq p \,\&\, (Hx \,\&\, Sx))$[13]

Instead of '$(x)(Hx \rightarrow Sx)$' one could also use the logically equivalent formula '$-(\exists x)(Hx \,\&\, -Sx)$' and instead of '$(x)((x \neq p \,\&\, Hx) \rightarrow Sx)$' '$-(\exists x)((x \neq p \,\&\, Hx) \,\&\, -Sx)$'.

Although the differences between $ES_{-eva}1$ and $ES_{-eva}2$ as well as the differences between $ES_{+eva}1$ and $ES_{+eva}2$ and between $ES_{+eva}3$ and $ES_{+eva}4$ could result from restrictive vs. non-restrictive *conceptions* of *sapakṣa*, it should be noted that this is not necessarily so. The interpretations $ES_{-eva}2$, $ES_{+eva}2$ and $ES_{+eva}4$ could equally be derived on the basis of the assumption of a non-restrictive concept of *sapakṣa*. This is so because there is a realistic possibility that the *pakṣa* is excluded from the realm of discourse in the contexts where the statements concerning the occurrence of the logical reason in *sapakṣa* appear. For as regards the sentence of NP 1,9 *pakṣadharmatvaṃ sapakṣe sattvaṃ vipakṣe cāsattvam iti* which is translatable as: "The being a *dharma* of the *pakṣa*, the being in the/a *sapakṣa* and/but the not being in the/a *vipakṣa*" (cf.above) its import could be naturally understood as follows: "[The threefoldness of a correct logical reason consists in] that it is a property of the *pakṣa*, occurs, apart from the *pakṣa*, in the/a *sapakṣa* and/but does not occur in the/a *vipakṣa*". Equally in the phrase of NP 1,13 *tatra kṛtakatvaṃ prayatnānantarīyakatvaṃ vā sapakṣa evāsti vipakṣe nāsty eva* it is very well possible that the occurrence of the reason in the *pakṣa* is not under discussion and that the author wants to say at this place that the mentioned properties, apart from occurring in the *pakṣa*, occur at best in the *sapakṣa* but not in the *vipakṣa*. However, albeit it could not entirely be ruled out, the supposition that the *sapakṣa*-condition of *Trairūpya* concerns the realm of *sapakṣa(s)* excluding the *pakṣa* is much less natural on the

[13] In **$ES_{+eva}3$** and **$ES_{+eva}4$** the constituent expressions '$(\exists x)(Hx \,\&\, Sx)$' and '$(\exists x)(x \neq p \,\&\, (Hx \,\&\, Sx))$' can be reduced to '$(\exists x)(Hx)$' and '$(\exists x)(x \neq p \,\&\, Hx)$' respectively.

basis of a non-restrictive concept of *sapakṣa* if one assumes one of the variants with existential claim, i.e. in the cases of $ES_{-eva}2$ and $ES_{+eva}4$, than if one assumes the variant without existential claim, i.e. $ES_{+eva}2$. For supposing that the *concept* of *sapakṣa* is not restrictive, it seems quite difficult to read the phrase *pakṣadharmatvaṃ sapakṣe sattvaṃ vipakṣe cāsattvam* in such a way that it conveys the thought that the logical reason should occur in the *pakṣa* and apart from the *pakṣa* in at least one other *sapakṣa* and not in any *vipakṣa*. The reason why it is unnatural to interpret the statement thus lies in that, while it is unproblematic to assume that the import would be made explicit by adding 'and apart from the *pakṣa*' it is much less probable that by the use of an expression with the meaning 'the being in the/a *sapakṣa*' a proposition equivalent to 'the being in the/an other *sapakṣa*' should be conveyed. For, in contradistinction to the first supplementation, which can be naturally deduced from the preceding statement that the logical reason occurs in the *pakṣa*, the latter one is not so immediately derivable. On the other hand, this difficulty would become irrelevant if no existential claim were involved in the *sapakṣa*-condition. There is no difficulty in understanding the phrase *sapakṣa eva sattvaṃ* and equally the phrase *sapakṣe sattvaṃ*, if it had the same import as the formulation with *eva*, as expressing the thought that apart from the *pakṣa* the logical reason occurs at best in a *sapakṣa*, irrespective of whether it is the *pakṣa* itself or some other *sapakṣa*-instance. For these reasons, while the hypostatization of a restrictive *sapakṣa*-concept would rule out non-restrictive explications of the *sapakṣa*-condition a non-restrictive *sapakṣa*-concept does not by itself necessitate a non-restrictive interpretation of the second condition of *Trairūpya.*

It should be noted that on account of the above mentioned circumstance that the *pakṣa* could be naturally taken as being excluded from the realm of discourse in the cited statements, there is no necessity to assume that the phrases *sapakṣa evāsti* and *sapakṣe sattvam*, if interpreted as having the same import as a formulation with *eva*, express a statement contradicting the first *Trairūpya*-condition on the hypothesis of a restrictive conception of *sapakṣa.* A statement having the import of: "Apart from the *pakṣa* the logical reason occurs only in a/the *sapakṣa*" would, on the basis of a restrictive *sapakṣa*-conception be equivalent to "Apart from the *pakṣa* the logical reason occurs only in something different from the *pakṣa* which exhibits the property to be proven". This is neither self-contradictory nor does it contradict the first condition of *Trairūpya* which demands that the *hetu* should be present in the *pakṣa.*[14]

The *vipakṣa*-definition *vipakṣo yatra sādhyaṃ nāsti* does not indicate whether the term *vipakṣa* refers to a realm or collection of things or to individuals. The phrase, taken by itself, could be translated either by "*vipakṣa* is [any thing] where the [property] to be proven is not" or by: "*vipakṣa* is [the realm/domain] where the [property] to be proven is not". However, in the formulations *vipakṣe 'sattvam* and

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[14] In the case of a restrictive *sapakṣa*-conception the difference between a non-restricted and a restricted realm of discourse becomes neutralized. This corresponds with the equivalences between '$(x)(x \neq a \rightarrow (x \neq a \,\&\, Fx))$' and '$(x)(x \neq a \rightarrow Fx)$' and between '$(\exists x)(x \neq a \,\&\, (x \neq a \,\&\, Fx))$' and '$(\exists x)(x \neq a \,\&\, Fx)$'.

vipakṣe nāsty eva it is difficult to interpret the term otherwise than as referring to a group, collection or realm. It is not necessary to give further justification for the claim that these phrases do not express that the *probans* does not occur in *some* instance which does not exhibit the *probandum*. In contradistinction to the pair *sapakṣe sattvaṃ* and *sapakṣa evāsti* there is also no reason to suspect a difference of actual meaning between the two formulations — except the fact that the one is a sentence and the other a nominalisation of a sentence. In order to make the supposition that *vipakṣa* is a term for individual things which do not exhibit the *probandum* compatible with the assumption that the formulations express a proposition which entails that nothing not exhibiting the property to be proven exhibits the logical reason we would require a rather artificial hypothesis: If it were assumed that *vipakṣe* represents a *locativus absolutus* one might analyze the expression *vipakṣe nāsty eva* as: "If [something] is a *vipakṣa*, [the logical reason] never occurs" and this could indeed be used to convey that it is not the case that the reason ever occurs in anything not exhibiting the *probandum*. A similar analysis would be required for *vipakṣe 'sattvam*. But fortunately it is not necessary for us to insist that the last contemplated alternatives are improbable. For it appears that all candidates for an explication of the third *Trairūpya*-condition which have to be seriously considered are compatible both with the assumption that *vipakṣa* is a term for a realm or collection and with the hypothesis that the expression refers to individual instances lacking the property to be proven and that corresponding analyses of the pertinent phrases should be accepted.

As with the term *sapakṣa* we must take into consideration the possibilities of a) a non-restrictive and b) a restrictive concept of *vipakṣa*. In combination with the alternatives that the phrases NP 1,9 *vipakṣe cāsattvam* and NP 1,14 *vipakṣe nāsty eva* either express a proposition which entails that there is at least one instance of the non-occurrence of the *probandum* = that there is at least one *vipakṣa*-instance (where the logical reason does not occur) or express a proposition which does not have this implication, we obtain at least four possibilities:

Ex 7: Everything which does not exhibit the *dharma* to be proven does not exhibit the proving *dharma*.

Ex 8: Everything which is not identical with the *pakṣa* and does not exhibit the *dharma* to be proven does not exhibit the proving *dharma*.

Ex 9: Everything which does not exhibit the *dharma* to be proven does not exhibit the proving *dharma* and there is at least one thing which does not exhibit the *dharma* to be proven (and accordingly does not exhibit the proving *dharma*).

Ex 10: Everything which is not identical with the *pakṣa* and does not exhibit the *dharma* to be proven does not exhibit the proving *dharma* and there is at least one thing which is not identical with the *pakṣa* and does not exhibit the *dharma* to be proven (and accordingly does not exhibit the proving *dharma*).

These alternatives could be represented in a yet more definite form as follows:

EV 1) $(x)(-Sx \rightarrow -Hx)$

EV 2) $(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx)$

EV 3) $(x)(-Sx \rightarrow -Hx) \ \& \ (\exists x)-Sx$

EV 4) $(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx) \ \& \ (\exists x)(x \neq p \ \& \ -Sx)$

It has to be noted that EV 2 and EV 4 can not only result from a restrictive *vipakṣa*-concept but also from the hypostatization of a restricted realm of discourse. (The import of *vipakṣe cāsattvam* would in the latter case be: "....and leaving the *pakṣa* out of account = leaving out of account whether the *pakṣa* actually exhibits the *dharma* to be proven or not, in (the) instances where the *dharma* to be proven does not occur the logical reason is never exhibited").

II

Though the differences appear subtle at first glance much depends on them:

1. The conjunction of the second and the third condition of *Trairūpya* would be equivalent to the *avinābhāva*-connection of the *Vādavidhi*, as explicated by **NC**, only if $ES_{+eva}1$ and EV1 (the contrapositive counterpart of the former) were assumed as correct explications of the *sapakṣa*- and the *vipakṣa*-condition respectively.
2. If restrictive *sapakṣa*- and *vipakṣa*-conditions are hypostatized the consequence results that the proposition to be proved or inferred would not have to be true even if all conditions of *Trairūpya* were fulfilled. This means: If one assumed as premises the complete set of the three "marks" of a logical reason the proposition to be proven would not logically follow from the premises if the realms the *sapakṣa*- and the *vipakṣa*-conditions concerned excluded the subject of inference, the *pakṣa*.

In this case the contrast to the Western traditional syllogism or a deductive derivation would be more radical than otherwise. One has sometimes pointed out that an *anumāna* in contradistinction to a syllogism works with examples and against the assimilation between an inference or proof of the kind of an *anumāna* and a deductive or syllogistic derivation it has been brought forward that the form of argument is fundamentally different in both cases: In the case of an *anumāna*, it was said, the possession of a property by some thing is proven merely by the possession of another property (by the same thing); the general scheme is: "A is B because of C".[15] It has to be admitted that even if the mentioning of a property as a logical reason is transformed into the assertion of a proposition in which the property in question is attributed to the *pakṣa* this proposition would not logically imply the thesis. But this does not affect the possibility that the conjunction of all propositions which would have to be true if all the marks of a logical reason were given (if all *Trairūpya*-conditions were fulfilled) allows one to derive in a deductive manner the thesis to be proven as a conclusion. This would be actually the case if either the

[15] Cf. among others H.N.Randle 1930/1976:230; B.K.Matilal 1970:86ff and 1967:169-170; J.F.Staal 1973.

sapakṣa-condition would be interpreted in such a way that it implies a universal proposition not containing the constituent 'x is not identical with the *pakṣa*', i.e. $ES_{+eva}1$ or $ES_{+eva}3$, or if a non-restrictive *vipakṣa*-condition were assumed.

3. If for at least one of the conditions two and three an interpretation is correct which contains an existential proposition as a component there can be no question of a logical equivalence between the second and the third mark of *Trairūpya*. At best one of the conditions might logically imply the other. But even this could not be the case if for both marks an interpretation were assumed which entail an existential claim.

If one looks around in the secondary literature which has appeared till now one can find a wide range of offers.

Regarding the restriction of the *sapakṣa-* and *vipakṣa*-realms it seems that some authors do not even conceive the possibility of excluding the *pakṣa* from the domain, as e.g. Th.Stcherbatsky in *Buddhist Logic* (see in particular *Buddhist Logic* I:242ff = §6). Other writers reckon with the possibility that the *pakṣa* is excluded, but mostly relate the exclusion to the *sapakṣa-* and not the *vipakṣa*-condition, like J.F.Staal 1960, 1973:16; R.S.Y.Chi 1969 (see especially pp.40-44), Gillon/Love 1980 (?). On the other hand it is claimed in S.Katsura 1983 that the *pakṣa* should be excluded from the "universe of discourse" and the author expresses the view that the conditions two and three are equivalent (see in particular Katsura 1983, p.539 (20), footnote 16 with an explicit rejection of the view of Gillon/Love). R. Hayes 1986 and, following him, H.G. Herzberger 1986 assume that the *pakṣa* is excluded in the *sapakṣa-* and *vipakṣa*-conditions but not that both marks are equivalent.

Regarding the inclusion of existential propositions it is naturally not assumed by all authors who hypostatize the logical equivalence of conditions 2 and 3. But also some writers who reject the equivalence, like Gillon/Love 1980 offer interpretations without existential inclusion. (The equivalence is denied here because the *sapakṣa*-realm is conceived as restrictive and the *vipakṣa*-domain as not restrictive).[16] Chi 1969 assumes the inclusion of an existential proposition only in case of the *sapakṣa*-condition. His interpretation of the second mark corresponds to $ES_{-eva}2$. It seems that till now no writer has claimed that the third condition includes an existential component.

Which of the offers should we chose? Or is the truth not yet to be found on the market?

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[16] This holds good at least at those places where the marks two and three are paraphrased and interpreted and it applies to the formula on p.371. On the other hand the same author(s) say that the fundamental division of the substrata is threefold, between *pakṣa*, *sapakṣa* and *vipakṣa*, and that this division is both "exhaustive" and "disjoint" (see pp. 375-376). The views of the authors are not entirely clear. Perhaps they want claim that the writer of the NP was on the one hand of the opinion that the realms of the *pakṣa*, the *sapakṣa* and the *vipakṣa* are *in fact* three disjoint domains (and that this has been assumed at least in the portion of the text numbered as Φ222) but that nevertheless the *concept* represented by the expression *vipakṣa* does not include the non-identity with the *pakṣa*, i.e. Def4.a represents the correct elucidation of the sense of the term. It is indeed true that *as a matter of fact* no entity within the *vipakṣa*-realm can be identical with the *pakṣa* *if* the property to be proven is in fact exhibited by the *pakṣa*.

III

The most far-reaching consequences would result if an interpretation which has the following characteristics were correct: 1. Both the *sapakṣa-* and the *vipakṣa-*conditions are restrictive, 2. both the *sapakṣa* and the *vipakṣa*-conditions include an existential component, namely the postulate of the existence of *sapakṣas* and *vipakṣas*, 3) the existential requirement exists also in the case of the formulations with *eva*. In this case the conditions of the fulfillment of the three marks of *Trairūpya* would maximally deviate from the *Vādavidhi*-condition as explicated above. Not any of the marks two and three would be equivalent to the *avinābhāva-*relation. Even the fulfillment of all *Trairūpya*-conditions would not guarantee the truth of the thesis to be inferred or proven — in contradistinction to the fulfillment of the *Vādavidhi*-condition. Not only the thesis of the logical equivalence, but also the assumption of a one-way implication would become invalid, even with regard to the variants containing *eva*.

We should check the characteristics of this most far-reaching alternative and examine whether or not they could be exemplified by the theory expounded in the NP.

In respect to the *sapakṣa*-condition, one can extract three arguments for a restrictive version from the already mentioned treatise on the NP of Gillon/Love 1980. However, on a closer analysis it turns out that two of them prove almost nothing and the third argument, although stronger, fails to be decisive. Gillon/Love adduce the following considerations:

1. It "is reasonable to assume that the word "samāna" ("similar")" — which occurs within the definition of *sapakṣa* in the NP — "restricts any two things to be regarded as samāna (i.e., similar, as opposed to identical) to non-identical things" (p.370).
2. One is entitled to assume that the domain of *sapakṣa* is identical with the realm of the *sādharmyadṛṣṭāntas* = the instances which could be adduced as examples exhibiting the property to be proven — as well as the proving property. But it appears improbable that a *pakṣa* can be its own *sādharmyadṛṣṭānta*. (Cf. pp.374-375)
3. If the domain of *sapakṣa* should not exclude the *pakṣa* the *sapakṣa* definition could have been formulated more briefly as *yatra sādhyam asti* = "[*sapakṣa* is that] where the property to be proven is not". (See p.375)

[1] The first consideration can hardly be used as a support for the thesis. It is true that ordinarily one does not say that a thing is similar to itself, which possibly is not rooted in the concept of similarity but in pragmatic principles (violation of conversational maxims à la Grice). But this does not rule out the possibility that in special contexts like the context of the explication of a theoretical term in a philosophical treatise deviances from the ordinary ways of talking occur.

[2] The second argument is of no use because the assumption of an identity of the realms of *sapakṣa* and *sādharmyadṛṣṭāntas* is not sufficiently supported by statements of the text. It is true that the author of the NP in his explanation of the concept of *sādharmyadṛṣṭānta* says that an example by/on account of similarity is one where the existence of the logical reason only in the *sapakṣa* is announced (NP1,16 *tatra sādharmyeṇa tāvat / yatra hetoḥ sapakṣa evāstitvaṃ khyāpyate*). But as

long as one does not presuppose from the very beginning that the phrase 'only in the *sapakṣa*' is meant to exclude both all *vipakṣas* and the *pakṣa* — with the effect that the argument would become circular since the correctness of the restrictive reading of *sapakṣa*, which has to be demonstrated, would be supposed — the phrase allows us to derive the identity of the *sādharmyadṛṣṭānta*- and *sapakṣa*-domains only under the condition that one gathers from the cited statement that the giving of examples by similarity is apt to prove the occurrence of the logical reason exclusively in the *sapakṣa*-domain. Such a stringent proof is indeed impossible if the realm of *sapakṣa(s)* comprises the *pakṣa* since even by the quotation of the totality of *sādharmyadṛṣṭāntas* nothing would be said with respect to the *pakṣa* — *if* we follow Gillon/Love in assuming that the *pakṣa* cannot be plausibly its own *sādharmyadṛṣṭānta*. However, there is no reason which compels one to gather that implication from the formulation. The immediately following sentence rather seems to indicate to what extent a *sādharmyadṛṣṭānta* makes known that the property to be proven only occurs in the *sapakṣa*-domain. For it is said: "As for example: what is produced that is observed as (being) non-eternal, like the pot etc." (NP 2,1 *tadyathā / yat kṛtakaṃ tad anityaṃ dṛṣṭaṃ yathā ghaṭādir iti*). Obviously the *sādharmyadṛṣṭānta* discloses the existence exclusively in the *sapakṣa*-domain by the fact that its announcement contains a statement of the form 'What is H, is S'.

Now, it would be indeed possible to assume that the formulation is not entirely explicit and that the statement pragmatically implied should be explicated thus: "Whatever, insofar as it is not identical with the *pakṣa*, is (observed as being) H (produced), is also (observed as being) S". For such a proposition would be the only one that could be in principle verified by the citation of *sādharmyadṛṣṭāntas*. But since we have to suppose — one could argue — that it is just this assertion which shows the occurrence of the reason only in the *sapakṣa*-domain we must hypostatize the *sapakṣa*-realm as excluding the *pakṣa*. This reasoning is, however, not compelling. What proves that the statement *yat kṛtakaṃ tad anityaṃ dṛṣṭaṃ* = "What is produced that is observed as non-eternal" cannot be taken in the way of its literal meaning, namely in such a way that it expresses that every thing (without exception) which exhibits the proving property is also observed as exhibiting the property to be proven?

Perhaps somebody might want to lay stress on the form *dṛṣṭam* "it is seen/perceived/observed/ascertained". He might point out that the universal statement: "What is produced that is seen/perceived/observed/ascertained as non-eternal" is valid only if the *pakṣa* is excluded since a *pakṣa* is defined precisely by the circumstance that its possession of the property to be proven is not yet ascertained. However, it is not certain that the form *dṛṣṭam* has the import assumed in this argument. For the past-participle might be used atemporally, or rather, it could be used with the effect of an atemporal form. Even if we hypostatise a perfective *linguistic* sense for the expression *dṛṣṭam* an atemporal proposition could be conveyed by the formulation since it is possible that the perfect-participle is here associated with the perfective aspect and the quoted sentence exhibits in its "deep structure" a conditional not explicit in the surface representation. This means that the formulation: "What is produced that is observed as (being) non-eternal" might go back to a "deep-structure" like: "What is produced that will have been observed

as (being) non-eternal if/whenever it is subjected to an examination". Therefore it is advisable not to lay too much weight on the perfective character of the expression *dṛṣṭam*.

But we can even admit that the formulation *yat kṛtakaṃ tad anityaṃ dṛṣṭam* is inexplicit and that the intention would be represented in a more explicit manner by the formulation: "What has been observed till now as being produced, that has been also observed as being non-eternal". Even in such a case a restrictive interpretation of *sapakṣa* would not be necessary. The deduction of a restrictive interpretation from the universal statement depends on the unjustified assumption that *khyāpyate* possesses the sense of 'is explicitly expressed' and not the sense of 'is made understood' or 'is indicated'. This means that it is hypostatized that according to the author of the NP the relation between the *yat...tat...*-statements and the proposition that the relevant logical reason occurs only in the *sapakṣa* has to be such that the former statements logically imply the latter proposition by virtue of their linguistic meaning or their propositional content. But what should force us to make this assumption? For it is equally well conceivable that the propositions of the *yat...tat...*-statements support the occurrence exclusively in the *sapakṣa* in a significant way but do not necessitate it. One could e.g. say that the statement: "What has been observed till now as being produced, that has been also observed as being non-eternal" conveys or indicates the proposition that only those things including the *pakṣa* which possess the proving property of producedness possess the property to be proven, non-eternity. For it indicates this in the way that its truth constitutes a good support for the truth of that proposition though it does not strictly entail it. Therefore the possibility cannot be ruled out that the term *sapakṣa* within the explication of the concept of *sādharmyadṛṣṭānta* is meant non-restrictively, i.e. including the *pakṣa*, even if one accepts as uncontested the assumption that the author of the NP believed that the occurrence of the logical reason only in the *sapakṣa* is indicated by statements like: "What is produced that is observed as (being) non-eternal".[17]

[3] More weight than the previous arguments possesses the circumstance adduced on p.375 of Gillon/Love 1980 that in the definition of the term *sapakṣa* a formulation like *yatra sādhyam asti* could be used if the domain of *sapakṣa* comprised *all* instances which in fact exhibit the property to be proven. After all, in the definition of *vipakṣa* the formulation *yatra sādhyaṃ nāsti* = "where the [property] to be proven is not" has been used. This fact possesses even more weight than the authors seem to attribute to it. For one could reason as follows: If the realm of *sapakṣa* coincided with the domain of *all* things actually exhibiting the *dharma* to be proven formulations which are not less precise, but more concise

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[17] The comments made in Gillon/Love on this point are unconvincing because the discussion of the statements concerning *sādharmyeṇa dṛṣṭānta* is reduced to the phrase *hetoḥ sapakṣa evāstitvam* and the analysis thus slurs over the interpretative problems which the textual passage contains. Therefore the statement: "Clearly, the class of substrata which satisfy the criterion expressed by the second form of trirūpa is identical with this class any of whose members may be named as sādharmya-dṛṣṭānta...." (p.375) possesses merely the character of a dogmatical assertion.

would have been at disposal. But the definition of *vipakṣa* shows that the author of the text was in the position to invent such alternative formulations. On the other hand, the hypothesis that the *pakṣa* is excluded from the realm of the *sapakṣa(s)* allows us to evade the consequence that the writer of the text chose a formulation inadequate for the optimal realization of his communicative purposes without necessity. For in this case the choice of a mode of expression containing a relational expression which under ordinary circumstances (because of the maxim not to state obvious trivialities) is not used in order to convey the relation of a thing to itself would be appropriate for the given purposes. A mode of expression the occurrence of which seemed at first glance difficult to explain under the hypothesis of a non-restrictive *sapakṣa*-conception would thus become easily explicable.

Nevertheless, though constituting a good support for the hypostatization of a restrictive *sapakṣa*-concept the argument is not fully compelling. Since it is based on the fact that some hypothesis makes certain phenomena understandable the existence of alternative hypotheses explaining the same phenomena can never be strictly ruled out. But we can claim that in view of this argument the assumption that the concept of *sapakṣa* hypothesized in the NP is restrictive appears more probable.

It must be noted, however, that it is not possible to derive, the other way round, a non-restrictive *vipakṣa*-conception from the definition of *vipakṣa* as that where the *dharma* to be proven does not occur. For the formulation encountered in the text is in this case more concise and economical than the relevant alternatives like *sādhyadharmabhāvena 'samāno 'rthaḥ* or others. Moreover, the *pakṣa*, as a matter of fact, never belongs to the domain of *vipakṣa* in cases where the thesis to be proven or inferred is correct. But the definitions occur in the context of the "marks" of a correct logical reason and if correct logical reasons aim at the derivation of true propositions — although they might not guarantee their truth — it appears very well understandable that the author of the text might have been more preoccupied with the consequence that the *pakṣa* would be included in the *sapakṣa*-realm in cases of the truth of the thesis if *sapakṣa* were defined as that which exhibits the *dharma* to be proven than with the fact that the *pakṣa* should belong to the *vipakṣa*-domain in cases of the falsity of the thesis if the latter concept is explicated as that where the property to be proven does not occur.

In view of the facts taken into account so far a restrictive interpretation of the term *sapakṣa* seems preferable to a non-restrictive interpretation whereas the alternatives with respect to *vipakṣa* must be left as undecided till now.

IV

However, we should search for further arguments strengthening or possibly questioning the assumption of a restrictive version of the second *Trairūpya*-condition or *sapakṣa*-concept, and we have to examine whether there are clues supporting certain alternatives regarding the *vipakṣa*-condition. It is indeed possible to make headway by considering other textual passages of the NP.

There are three further passages in the NP which provide arguments for restrictive interpretations of the *sapakṣa*- or *vipakṣa*-conditions: 1. The section of the

fallacious reason (*hetvābhāsa*) '*asādhāraṇa*'; 2. the sections of the fallacious reasons '*dharmisvarūpaviparītasādhana*' and '*dharmiviśeṣaviparītasādhana*'; 3. the section of the fallacious reason '*viruddhāvyabhicārin*'.

1. The section of the *asādhāraṇahetvābhāsa*

The passage dealing with the fallacious reason of the type *asādhāraṇa* has been discussed also in Gillon/Love 1980:375-376 in order to support the thesis of a threefold division into *pakṣa*, *sapakṣa* and *vipakṣa*. The text runs as follows:

NP 3,22 *asādhāraṇaḥ śrāvaṇatvān nitya iti / tad dhi nityānityapakṣābhyāṃ vyāvṛttatvān nityānityavinirmuktasya cānyasyāsaṃbhavāt saṃśayahetuḥ / kiṃbhūtasyāsya śrāvaṇatvam iti /*
= "An uncommon [fallacious reason] is: '[The sound] is eternal because of [its] audibility'. For, since this [*dharma*] is excluded from eternal and not-eternal *pakṣas* and since something else which is different from eternal and not-eternal is not possible, it (=the cited logical reason) is a cause for doubt [which consists in the fact that one has to ask oneself]: 'What kind of [thing] has audibility?'"

The restrictive interpretations of the *concepts* of *sapakṣa* and *vipakṣa* result immediately if one accepts the following assumption: the eternal and not-eternal *pakṣas* which are mentioned in the text are identical with the domains of *sapakṣa* and *vipakṣa* in the given case. For what else would justify the assertion that audibility is excluded from both the *sapakṣa*- and the *vipakṣa*-domains if these did not exclude the *pakṣa per definitionem*? If somebody assumes the position of the Buddhist (which the author of the NP would in all probability support) he has to suppose that audibility is actually instantiated in the *vipakṣa*-domain, if this domain comprised *everything* which in fact does not exhibit the property to be proven. Otherwise audibility must belong to the *sapakṣa*-realm, if the latter consists of everything exhibiting the *dharma* to be proven.

It is true that this reasoning yields a good support for the restrictive interpretation of the concepts of *sapakṣa* and *vipakṣa*; it is however not hundred per cent conclusive. The reason is not only the fact that the argument relies on the additional premise of the identity of the mentioned eternal and not eternal *pakṣas* with the realms of *sapakṣa* and *vipakṣa*. More decisive is the circumstance that one has to reckon with the possibility of the existence of a pragmatic implicature which is weaker than the proposition which would be asserted if one takes the formulation in its literal sense. One cannot entirely rule out the possibility that the author of the NP would accept as true a proposition which, though conveyable by the formulation *tad dhi nityānityapakṣābhyāṃ vyāvṛttatvāt*, would be more explicitly expressed by a formulation like: "For since this [property of audibility] is excluded from all eternal and not eternal *pakṣas* (= *sapakṣas* and *vipakṣas*), *in so far as* they are not identical with the *pakṣa* (or: *in so far as* they are definitely established as exhibiting or not exhibiting the property to be proven)". But if only the weaker propositions expressed by the *in so far*-sentences were accepted as true the domains in which audibility is avowedly not instantiated could be taken as excluding the *pakṣa*, even if the

concepts of *sapakṣa* and *vipakṣa* were non-restrictive.[18]

But fortunately this is not all that can be said regarding this passage. For there is also the fact that audibility as a reason for the thesis that sound is eternal is classified as a fallacious reason. But now one could point out that it is plausible to accept the following interpretational maxim: Any interpretation of the *Trairūpya*-doctrine of some author A which entails the incorrectness of inferences and proofs which A himself declares as incorrect should be preferred to all alternatives which do not entail this, *as long as* there are no reasons which could invalidate the application of this maxim. Now, in the above given example of a fallacious reason of the *asādhāraṇa*-type the first condition of *Trairūpya* is clearly not violated. If the *Trairūpya*-doctrine should exclude such reasons the conditions two or three must be infracted. The third condition would be violated only if both a not restrictive interpretation of the *vipakṣa*-condition and the non-eternality of sound were hypostatized. On the other hand we find no indication in the text which betrays that the subject of inference does not exhibit the property to be proven. The statement that the logical reason is excluded from both eternal and not eternal *pakṣas* suggests rather that the third condition should be fulfilled. Therefore it seems most reasonable to assume a violation of the *sapakṣa*-condition. But this would be the case only if the second condition of *Trairūpya* involved the assertion of the existence of a thing which is different from the *pakṣa* and exemplifies the *dharma* to be proven. Thus only the candidates $ES_{-eva}2$ and $ES_{+eva}4$ remain.

By this we have an additional argument for the exclusion of interpretations which take the *sapakṣa*-condition as equivalent to universally quantified statements in which the predicate expressing the non-identity with the *pakṣa* appears in the consequence of a conditional, i.e. interpretations according to which the *sapakṣa*-condition could be represented by the formula '$(x)(Hx \rightarrow (Sx \ \& \ x \neq p)$'. Such readings are assumed among others by Gillon/Love 1980 and J.F. Staal 1960. These interpretations are in any case hardly acceptable on account of general hermeneutical maxims — in this case the maxim not to suppose statements involving evident contradictions as long as no special reasons demand such a supposition. If they were assumed Uddyotakara's verdict of an *unmattavākyam* would indeed apply. But in order to avert this consequence it would already suffice to hypostatize that the *pakṣa* is excluded from the realm of discourse in the context of the *sapakṣa*- and *vipakṣa*-conditions. Thus, even supposing that the *statements* of the *sapakṣa*-

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18 The argument construed in Gillon/Love 1980:376 for the tripartition of *pakṣa*, *sapakṣa* and *vipakṣa* from this textual passage is entirely unconvincing. There is no compelling reason for assuming a referential interpretation for the expression *anya*. The hypostatized interpretation of the phrase *nityānityavinirmuktasya cānyasyāsaṃbhavāt*, namely: "because what is other [than pakṣa which is eternal and pakṣa which is not eternal] to be different from both what is eternal and what is not eternal is impossible" is not even linguistically probable. But if one interprets it in the manner assumed by us above it is impossible to take *anya(sya)* or *nityānityavinirmukta(sya)..anya(sya)* as referring to some thing. Rather the whole phrase represents a negated general existential proposition (with a modal operator). This means that its logical form is: "It is impossible that there is something else (than the things which are either F or not-F) which is neither F nor not-F", but not: "The other thing = the *pakṣa* is impossibly neither F nor not-F".

condition are literally representable by the above cited formula, the condition itself would be identical with $ES_{+eva}2$ — because of the logical equivalence between '$(x)((x \neq p \ \& \ Hx) \rightarrow (x \neq p \ \& \ Sx))$' and '$(x)((x \neq p \ \& \ Hx) \rightarrow Sx)$'. But, as we have seen above, even this is not the version which should be favoured most.

2. The sections of the *dharmisvarūpaviparītasādhana* and the *dharmiviśeṣaviparīta-sādhana*

The NP mentions four kinds of "contradictory" logical reasons. The last two are relevant for our purpose because their explanation in the text seems to betray a restrictive conception of *vipakṣa* and, if our analysis is correct, throws light on the status of the *Trairūpya*-conditions as well as on the whole theory. The fallacious reasons called '*dharmisvarūpaviparītasādhana*' and '*dharmiviśeṣaviparītasādhana*' are expounded in the passage of NP 5,11-18 which runs as follows:

dharmisvarūpaviparītasādhano yathā / na dravyaṃ na karma na guṇo bhāvaḥ ekadravyavattvāt guṇakarmasu ca bhāvāt sāmānyaviśeṣavad iti / ayaṃ hi hetur yathā dravyādipratiṣedhaṃ bhāvasya sādhayati tathā bhāvasyābhāvatvam api sādhayati / ubhayatrāvyabhicārāt // dharmiviśeṣaviparītasādhano yathā / ayam eva hetur asminn eva pūrvapakṣe 'syaiva dharmiṇo yo viśeṣaḥ satpratyayakartṛtvaṃ nāma tadviparītam asatpratyayakartṛtvam api sādhayati / ubhayatrāvyabhicārāt // = "A [fallacious reason] that proves the opposite of the own nature of the *dharma*-possessor (= the subject of inference = *pakṣa*) is e.g. [the following]: 'Being is neither a substance (*dravya*) nor a motion/action (*karma*) nor a quality (*guṇa*) because it possesses [numerically] one substance [as its locus] and because it exists/occurs in qualities and motions/actions, like generality-pecularities (= lower universals)'. For this logical reason, in the same manner as it proves the negation of substance etc. of being (i.e. proves that being is not a substance etc.), proves also the not-being of being because it does not deviate in both cases. A [fallacious reason] that proves the opposite of [some] characteristic attribute of the *dharma*-possessor is e.g.: The very same logical reason with respect to the very same aforementioned *pakṣa*; that which is the characteristic attribute of this very same *dharma*-possessor, namely the [property of] causing the idea 'being/existing', of this [the same logical reason] proves also the opposite, namely the [property of] causing the idea 'not being/existing' because it does not deviate in both cases."

It seems that we have to do with a proof in which the *dharma*-possessor, the *pakṣa*, is "the being", i.e. the highest universal according to the Vaiśeṣika-ontology which is assumed to be a pure universal in contradistinction to the lower universals (*sāmānyaviśeṣa*) which are both universals and peculiarities; the *dharma* to be proven consists in the property of being neither a *dravya* nor a *guṇa* nor a *karma*, i.e. in not belonging to one of the first three categories according to Vaiśeṣika-ontology; the logical reason appears to be the occurrence in numerically one substances plus the non-inherence in *guṇas* and *karmas*. The formulation of the text suggests that there is just one logical reason involved, which means that we have to assume complex *dharmas* both in the case of the *probandum* and the *probans*. Thus

the property to be proven would correspond to the predicate: 'x is neither a *dravya* nor a *guṇa* nor a *karma*' and the proving property to the predicate: 'x possesses/inheres in one *dravya* and occurs/inheres in *guṇas* and *karmas*'.[19] Now, the author of the NP obviously wants to say that the same logical reason would equally well suit in order to prove either the *dharma* of being not being (*abhāva*) or the *dharma* of causing the idea 'not being/existent' with respect to the same substratum of inference, i.e. the highest universal 'being' (*bhāva*). But this would contradict either the "own nature" or some "characteristic peculiarity" of the substratum in question because being (a) not-being is incompatible with the essence of the substratum itself and causing the idea 'not being/existing' contradicts some essential feature which is ascribed to the highest universal 'being' (or: existing-ness — *sattā*) in the Vaiśeṣika-doctrine, namely the property of causing the idea 'being/existing'. (The contradiction rests in the latter case on the presupposition that it is impossible that one and the same entity causes incompatible ideas or notions). But we do not find the slightest hint for the assumption that the three marks of *Trairūpya* should not be fulfilled in the case of these two variants of contradictory reasons. Rather the text strongly suggests that in each of both cases the proofs are counterbalanced by alternative proofs establishing some contradictory property which do in no way differ from the former ones in so far as the fulfillment of the three marks of a logical reason is concerned. But this means that the *dharma* of inhering in one *dravya* and in *guṇas* and *karmas* could without violation of the *Trairūpya*-conditions establish either that the highest universal 'being' does not belong to the first three categories of *dravya*, *guṇa* and *karma* or that the highest universal is not what it actually is, namely *bhāva*, or that it should lack an essential feature it actually has, namely causing the idea 'being/existing'.

But this seems to create a serious problem: If e.g. the derivation of the thesis that being is neither a *dravya* nor a *guṇa* nor a *karma* on account of its inhering in numerically one substances and its occurring in *guṇas* and *karmas* is invalidated by the fact that the same logical reason allows one to deduce that being is not being, is not *every* logical reason and *every* proof or inference of the kind of an *anumāna* thereby invalidated?[20] For the reasoning that counters the original proof seems to employ the fact that the *dharma* of inhering in numerically one substances but not in *guṇas* or *karmas* is, apart from the *pakṣa*, exhibited by and only by entities which are not identical with the highest universal 'being', namely by the lower universals. But if on account of the cited logical reason this fact can invalidate the proof that being is neither a *dravya* nor a *guṇa* or *karma* a queer consequence seems to result: the circumstance that producedness is, apart from the *pakṣa*, exhibited by and only

[19] If we want to represent the *probans* and the *probandum* in an even more unambiguous manner we can use the notation of predicate calculus and write: 'x possesses one *dravya* & (x inheres in *guṇas* & x inheres in *karmas*)' for the logical reason and '$-(\exists y)((y$ is a *dravya* $\vee$ (y is a *guṇa* $\vee$ y is a *karma*)) & $x = y)$' for the property to be proven. In contrast to this M. Tachikawa seems to assume a plurality of reasons and a plurality of properties to be proven within one proof — cf. M. Tachikawa 1971:137-138, footnote 46. However, this harmonizes less with the wording of the textual passage.

[20] This difficulty was pointed out to me by Claudius Nenninger.

by entities which are not identical with sound and which do not exemplify the characteristic peculiarities of sound should by the same token equally invalidate the proof of the non-eternity of sound on account of its producedness. But it is easy to see that all inferences and proofs acknowledged as valid in the *anumāna*-theory would become invalid if this standard example of a valid proof breaks down. For any *pakṣa* p we could derive that p exhibits the property corresponding to the predicate 'x $\neq$ p' from any logical reason 'H' fulfilling the *Trairūpya*-conditions in their restrictive form.

At first glance it might appear insufficient to point out the circumstance that a proof to the effect that something is not what it actually is should be ruled out in the latter cases because of the fact that it violates the demands established in the NP itself for a correct thesis. For a violation of the requirement that the thesis is not contradictory (*viruddha*) would be given, one should think, equally in the case of the counter-proof that being is not (identical with) being on account of its inhering in numerically one substances and its occurrence in *guṇas* and *karmas*, *if* it is regarded as violated in the case of the counter-proof deriving that sound is not (identical with) sound on account of its exhibiting some property like producedness. But is this really so? Should perhaps a disanalogy exist between both cases in the eyes of the author of the NP? This is indeed not entirely impossible. The decisive point could lie in the fact that the theses of the counter-arguments would only contradict doctrinal assumptions made by the proponent himself, but not the assumptions held by any virtual opponent who offers the counter-arguments. After all an opponent who does not advocate the thesis that a highest universal 'being' exists would not necessarily contradict his own views; and because the existence of such an entity is not assumed by *some* persons, like e.g. the opponent, it would not contradict a commonly held opinion either. At least as long as one hypostatizes the theorem that the attribution of any property whatsoever to a non-existent entity does not constitute a contradiction the thesis that being is not (identical with) being should not count as contradictory under the given circumstances. The avoidance of a contradiction in the case of the counter-proof deriving that being is the cause of the idea 'not being' would not even require as much: It suffices not to assume that causing the notion 'existing' constitutes an essential property of a highest universal called 'being'.[21]

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[21] If the ascription of being not (identical with) being should rely on the supposition of the non-reality of the highest universal acknowledged in the Vaiśeṣika-doctrine, it must not follow that the canon of fallacious theses (*pakṣābhāsa*), which is expounded in the NP before the explanation of fallacious logical reasons, can only refer to those theses which occur in positive arguments, but not to those which are constituents of counter-proofs.

According to our text, there is a variety of fallacious theses which is called '*aprasiddhaviśeṣya*' and which is exhibited by cases where the *substratum* is not established as existing. However, the explication given in NP 3,2, namely *sāṃkhyasya bauddhaṃ prati cetana ātmeti* = "[if] a Sāṃkhya [says] to a Buddhist: 'The soul is sentient'", suggests that the non-acknowledgement of the existence on the part of the respective opposite party is essential. (Similarly, the explanation of the fallacious reason of the type *āśrayāsiddha* betrays that the denial of existence on the part of the opposite side is at stake, since in NP 3,14 it is said: *dravyaṃ ākāśaṃ guṇāśrayatvād ity ākāśāsattvavādinaṃ praty āśrayāsiddhaḥ*

Because of the fact that the author of the NP does not go into the problem mentioned above and does not say more regarding the possibility of counter-proofs it is impossible to decide whether or not the just expounded considerations reflect his views. There is at least another possibility of solving the dilemma which is however related to the former proposal. The arguments of both the proof and the counter-proofs as they are understood by us involve a step which could be described by the term 'inductive extension'. By 'inductive extension' we mean the phenomenon of transferring a situation given in the domain outside the subject of inference = *pakṣa* to the *pakṣa* itself. In particular, the term has the function to refer to the derivation of a thesis attributing a property to the *pakṣa* on the basis of the fact that the same property is exhibited by all instances *apart from the pakṣa* which exhibit the property playing the role of a logical reason. Now, it is not impossible that the intuition lying behind the rejection of proofs like the one that has been cited in the explanation of *dharmisvarūpaviparītasādhana-* and *dharmiviśeṣaviparītasādhana-*reasons is based on the implausibility of hypostatizing an inductive extension in the

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= "a [logical reason] of which the *substratum* is not established is [if one says] against one who advocates the non-existence of the ether: 'The ether is a substance because it is a *substratum* of *guṇas*'").

One might object that the defect of the type *svavacanaviruddha* = "contradiction by [one's] own words" must be exhibited. But even this is not necessary. The example given for this category in NP 2,22 is: *mātā me vandhyeti* = "[if one says:] 'My mother is barren'". This shows that a *svavacanaviruddha*-thesis is characterized by the fact that the expresssions used in formulating it involve a contradiction. On the other hand, the remark that the logical reason of inhering in numerically one substances as well as in *guṇas* and *karmas* "proves also the non-beingness of being" (*bhāvasyābhāvatvam api sādhayati*) must not be taken to imply that some opponent can formulate a thesis which is contradictory by virtue of its expressions. It might mean only that it is possible to prove *of* being that it is not (identical with) being. This can be done without contradictory formulations. The relevant thesis could e.g. be formulated by use of demonstratives referring to the highest universal of the Vaiśeṣikas (formulations like: "This is not (identical with) being") or by using descriptions alluding to the way in which the opponent intends to refer to the highest universal of his doctrine without implying that the description correctly picks out the intended entity (like: "That which the Vaiśeṣikas call 'being' is not (identical with) being") etc. The thesis formulated in the counter-proof must not fall under the category of *āgamaviruddha*-theses either because putting forward the counter-proof must not require that the proposition that some entity exists which is identical with being is acknowledged as true in the doctrine of the one who formulates the counter-argument. On the other hand, it is not necessary that the counter-proof relies on the premise that the highest universal, being, does not exist: The supposition of the non-existence of anything identical with being could reasonably be brought forward as a problematic possibility counterbalancing the opposite thesis. (The counter-proof has to rely on the assumption of the existence of being; otherwise the first *Trairūpya*-condition could not be fulfilled. But the *thesis* that it is not true of the allegedly highest universal, being, that it is (identical with) being must not be defective, if the theory of the NP allows for the possibility that propositions are *assumed* for the sake of argument without being acknowledged as theorems by the one who uses them in this role). Therefore the situation regarding the counter-proof is here in fact different from the case in which someone exploits the circumstance that the logical reason has been found as occurring only in instances different from sound or in instances not exhibiting audibility in order to prove of sound that it is not identical with sound or that it is not audible - and other cases of this kind.

pertinent case. There seems intuitively little justification for assuming that since all other instances which inhere in numerically one substances or in *guṇas* or *karmas*, namely the lower universals (and the ultimate *viśeṣas*), do not belong to the categories of substance, quality or motion/action the same must hold good for being too. The possibility that the case in question might constitute an exception to the rule appears all too natural here. This is so because it is natural to ask why there should not exist some substance which differs from the ones known till now in that it also inheres in precisely one other substance or why there should not be a certain *guṇa* or *karma* which in contradistinction to others can inhere in another *guṇa* or *karma*. There is no other basis for the inductive extension in the discussed proof than specific dogmas of the Vaiśeṣika-school. But this could give reason to claim that *if* the pertinent inductive extension should be warranted in this case it would also be warranted in the case of deriving that something is not what it is.

Thus there would be sufficient objective reasons to dispute the validity of proofs of the cited type. It is difficult to decide to what extent they are identical with the motives which induced the author of the NP to describe the situation given in the case of the fallacious reasons, named *dharmisvarūpaviparītasādhana* and *dharmiviśeṣaviparītasādhana*, as we find it depicted in the text. Moreover, it is not entirely certain that the writer of the NP was actually aware of the problem which threatens to result from his position and which we tried to mitigate. In any case, the discussed theoretical difficulty does not refute the correctness of our proposed interpretation of the passage dealing with the last two varieties of contradictory reasons.[22]

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[22] It should be noted that the logical reason 'inhering in numerically one *dravya* and in *guṇas* and *karmas*' requires a different interpretation in the context of its exemplification by the adduced example than in the context of its instantiation in the *pakṣa*. The proposition that the highest universal 'being' inheres is numerically one *dravya* as well as in *guṇas* and *karmas* means that there is one entity, namely the highest universal, which occurs in numerically one substances, qualities and motions/actions. But there is no one entity, called 'generality-particular' = *sāmānyaviśeṣa*, which occurs in numerically one substances as well as in qualities and motions/actions. Rather it is so that certain entities which belong to the class of *sāmānyaviśeṣas* exhibit the property of inhering in numerically one substances, like 'substance-ness' = *dravyatva*, whereas *other* entities belonging to the same class exhibit the property of inhering in *guṇas*, like red-ness, quality-ness etc., and still other entities, like motion/action-ness, exemplify the property of inhering in motions/actions. Therefore generality-particularity (*sāmānyaviśeṣa*) in the function of an example can at best refer to the *group* of particular *sāmānyaviśeṣas* as an entity, in order to exemplify the complex predicate 'x inheres in numerically one *dravyas* and in *guṇas* and *karmas*'. But the crux is not only that the *Vaiśeṣika*-ontology has no place for groups of particulars or universals as entities (which could thus belong to a category of their own), but above all that the predicate 'x inheres in numerically one *dravyas* and in *guṇas* and in *karmas*' requires different readings in the relevant cases. In contradistinction to its application to the highest universal 'being', constituting the *pakṣa* in the present case, it must be given a "group-reading" when applied to the example. According to the group-reading the predicate is true of a group if (and only if) each member of the group exemplifies (at least) one of the coordinated predicates, i.e. if it either inheres in numerically one substance or in a *guṇa* or in a *karma*. More generally one can say that "group-predicates" of the form 'Fx & Gx (& Hx &....)' is true of a group if its members exhibit either 'Fx' or 'Gx' (or 'Hx'....). This corresponds to our actual linguistic practice. We say, for example, that

For our purposes it is however relevant that since the passage suggests that the logical reasons of the *dharmisvarūpaviparītasādhana-* and *dharmiviśeṣaviparīta-sādhana-*types as well as the relevant counter-proofs fulfill the conditions set up by the *Trairūpya*-doctrine they indicate restrictive versions of the *vipakṣa* condition. Otherwise the requirement of the non-occurrence in the *vipakṣa*-realm should be violated by the counter-proofs because on the supposition of a *vipakṣa*-domain which includes the *pakṣa* the logical reason which must be exhibited by the *pakṣa* (otherwise not even the first condition would be fulfilled) must occur in at least one *vipakṣa*-instance since the *pakṣa* in question cannot but lack the property to be proven (for it is impossible and even explicitly declared to be impossible that being is (identical with) not-being).

If this is true, it would be a significant result. It seems to follow that a) fulfillment of the *Trairūpya*-conditions is not fully sufficient for acceptability or correctness and b) there is a use of the expressions *sādhaya(ti)* and *avyabhicāra* which does not entail acceptability of the corresponding proofs but most probably entails the fulfillment of all the *Trairūpya*-conditions. This suggests the following picture: The three "marks" of a logical reason laid down in the doctrine of *Trairūpya* constitute together a necessary, but not sufficient requirement for the acceptability of proofs and the soundness of inferences. If these necessary conditions are fulfilled it is however allowed to say in regard to the respective logical reasons that they "prove" and that they are "not deviating" (*avyabhicārin*). In order to be fully acceptable or sound further requirements have to be met with. Among the additional requirements there is at least a requirement of the non-existence of a counterbalance, i.e. it is necessary that a logical reason used for an inference or

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the congress-members are in the rooms C and D, meaning that some of the members are in room C and others in room D, i.e. the individual members are either in room C or in room D. (Similar phenomena exist in the case of sentences with generic terms: The sentence (a) 'The tiger is to be found/Tigers are to be found in Africa and in Asia' expresses, according to its most natural interpretation, that tigers can be found in Africa or Asia). It is only the indeterminacy of the technical term *dharma* as it occurs in the Indian theory/theories of inference which makes it undecidable whether the *dharma* of inhering in numerically one *dravyas* and *guṇas* and *karmas* is the same *dharma* in connection with the group of *sāmānyaviśeṣa*-entities as in connection with the highest universal 'being'. It is not improbable that the difference of reading required in order to refer the logical reason of the present case both to the *pakṣa* and to the example has not been realized by the author of the NP. Therefore no sufficient reason exists to question the correctness of our interpretation according to which *one* coordinated property, namely inhering in *dravyas* and inhering in *guṇas* and *karmas* functions as the logical reason on account of the fact that it entails the problem that no *sapakṣa*-instance exists which exhibits the logical reason in the same sense as the one which has to be hypostatized in connection with its exemplification by the *pakṣa*. In particular, this circumstance is insufficient to prove that Tachikawa's above mentioned analysis is correct, according to which a plurality of logical reasons is involved which separately prove that the highest universal is not a substance, that it is not a quality and that it is not a motion/action, using different examples of the domain of the lower universals with respect to each logical reason. It should be noted, however, that even if Tachikawa's interpretation were correct, this would in no way affect the main point of our analysis, namely that the present textual passage indicates a restrictive version of the *vipakṣa*-condition and suggests that a logical reason fulfilling the *Trairūpya*-conditions can be unacceptable.

proof does not equally allow for another inference or proof using the same reason which equally fulfills the same requirements (of *Trairūpya*) and contradicts the original thesis in some way. But the types of contradiction are not limited to the incompatibility with the own nature or essential particularities of the substratum of the proof or inference. The mentioning of a variant of contradictory reason, called *dharmaviśeṣaviparītasādhana* (discussed in NP 5,7-11), shows that reasons that can be counterbalanced by arguments establishing a specification of the originally established property which contradicts a specification that has been aimed at by the original arguments are equally unacceptable. Also in this context the term *avyabhicāra* appears. On the other hand, in contradistinction to the discussion of the fallacious reason of the type *dharmasvarūpaviparītasādhana*, the first variety of contradictory reasons which clearly violates the third *Trairūpya*-condition, neither in the passage dealing with the *dharmaviśeṣaviparītasādhana* (the second variety) nor in the passage of the two last varieties cited by us above any statement appears to the effect that the reasons in question occur in the *vipakṣa*.[23]

3. The section of the *viruddhāvyabhicārin*

There is a passage that corroborates the conjectures of the preceding section. In the section of NP 8,21-9,2 a fallacious reason called '*viruddhāvyabhicārin*', a variety of the "inconclusive" (*anaikāntika*) reasons, is explained. The passage runs like follows:

viruddhāvyabhicārī yathā / anityaḥ śabdaḥ kṛtakatvād ghaṭavat / nityaḥ śabdaḥ śrāvaṇatvāt śabdatvavad iti / ubhayoḥ saṃśayahetutvād dvāv apy etāv eko 'naikāntikaḥ samuditāv eva // = "A [logical reason] which does not deviate and is contradictory (or: which does not deviate with respect to a contradictory [result]) is e.g. [the following]: 'Sound is non-eternal because it is produced, like a pot. Sound is eternal because it is audible, like sound-ness.' As both [reasons] cause doubt, these two taken together are one inconclusive [reason]."

It is not necessary to discuss the doctrinal presuppositions of the cited example here (For this see M. Tachikawa 1971:135). The points which are relevant for our purpose are clear enough. The proof in question consists of two arguments. Both arguments try to establish two different propositions which contradict each other in

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[23] Since the essence of the argument for a restrictive *vipakṣa*-realm consists in the fact that *any* logical reason which tries to establish that being is (identical with) not-being should violate the *vipakṣa*-condition, if it were not restrictive, together with the fact that the wording of the text suggests that no such violation is exhibited by *some* logical reasons used for this purpose, our considerations are relatively independent of the exact interpretation of the above cited textual passage, in particular independent of the question as to why the fallacious reason discussed in the passage is, in the eyes of the author of the NP, apt to prove that being is (identical with) not-being or that being possesses the property of causing the notion 'not being'. The gist of the argument could be even preserved if one followed M. Tachikawa's suggestion mentioned above according to which the original argument involves a plurality of reasons and *probanda*.

the way that in one of them a property is ascribed which is the negated correlate of the property ascribed to the same entity in the other proposition. Now, on the hypothesis of a not restrictive *vipakṣa*-condition one of the arguments would be bound to violate this requirement as long as it is supposed that one and the same entity cannot exemplify two mutually contradictory properties. But although it is practically beyond doubt that the author of the NP acknowledged this principle he neither alludes to a violation of the *vipakṣa*-condition nor does he account for the possibility that one of the arguments has to be classified among those types which involve the occurrence of the logical reason in the *vipakṣa*-realm, in particular the type where the reason is regarded as occurring in both the *sapakṣa*- and the *vipakṣa*-domain and is termed 'common' (*sādhāraṇa*). Rather it is said in the text that both reasons cause doubt, which obviously means that they cause doubt taken together, but not singly. Moreover the technical term used for the designation of this kind of fallacious reason contains the component *avyabhicārin*. Though the theoretical possibility cannot be ruled out that the writer of the NP only adopted a ready-made term from the tradition the descriptive content of which did not suit (any more) his own theory the fact that *avyabhicārin* is used in other cases where it probably refers to reasons fulfilling the totality of the *Trairūpya*-conditions makes another hypothesis more probable: Śaṅkarasvāmin (or whoever wrote the NP) believed that both arguments involved in the example of a *viruddhāvyabhicārin*-reason contain logical reasons which do not violate the *Trairūpya*-conditions, in particular the second and the third condition. He could make this assumption because he hypostatized a restrictive *vipakṣa*-condition. Nevertheless, the example he cites is considered as involving a fallacious reason.

However, the manner in which he describes the situation does not clearly show whether or not the two arguments are themselves deficient. If they are not, it is difficult to see, how the logical reasons contained in them can constitute one fallacious reason if they are taken together. For it does not appear very probable that the reason in question should consist in the property which is constituted by the conjunction of both reasons, i.e., by the *dharma* which corresponds to the predicate: 'x is produced & x is audible'. This complex property appears nowhere in the relevant example in the function of a logical reason nor does the example in any way imply that such a property has to play the role of a *probans*. But even if it should play such a role it would not harmonize with the fact that a category of fallacious reasons of its own is postulated. In such a case the reason in question should be subsumed under some of the other categories of fallacious reasons even

if we also consider possibilities which only theoretically exist.[24]

Therefore we should perhaps suppose that the writer of the NP only failed to express his view that the constituent arguments involve deficient logical reasons with sufficient clarity. But if the constituent arguments should be defective a possibility presents itself which would not be uninteresting. It could be assumed that the view lying behind the exposition of the *viruddhāvyabhicārin*-fallacies in the NP involves that context is a factor which determines the acceptability of proofs and inferences and the soundness of reasons: Both arguments which occur in the *viruddhāvyabhicārin*-example are acceptable, if taken by themselves, but they are unacceptable if they occur in conjunction with another reasoning aiming at proving the opposite property of the same thing. Accordingly the acceptability of the logical reasons involved would depend among other things on the context in which the inference or proof containing the logical reason in question stands.

If this corresponds to the views which the author of the NP had on this issue we could give the following account of the status of the *Trairūpya*-theory: The doctrine of *Trairūpya* contains three necessary, but not sufficient requirements for the acceptability of logical reasons appearing in inferences or proofs. These are by the same token necessary requirements for the correctness of the inferences or proofs themselves. But acceptability depends on at least two further factors: 1. There must not exist a *potential* counterbalancing reasoning in the form of an argument which on the basis of the ascription of the same property to the same substratum allows to derive a specification of a property or a property which is incompatible with the original thesis or its intention and complies with all the *Trairūpya*-conditions (or perhaps even more generally: complies with exactly the same requirements which the original reasoning fulfills). 2. There must not exist an *actual* counterbalancing reasoning (carried out by the same person or by the same

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[24] The author of the NP explicitly relegates audibility in connection with sound to the realm of "uncommon" reasons. But by the same token the property of being both audible and produced would have to be subsumed under that category, if the metaphysical premisses are the same. If audibility alone exhibits the defect of not being exemplified outside the *pakṣa* this would *a forteriori* hold good for audibility plus producedness. On the other hand the argument is presented as being subject to the metaphysical theorem that sound-ness is audible. But even this does not change the situation fundamentally. For under the supposition that there is a *sapakṣa*-instance of audibility in the form of sound-ness the conjunctive property of being audible and produced should remain an uncommon reason, if sound-ness is assumed as being unproduced (for there would be nothing except the *pakṣa* which is both audible and produced). Otherwise, i.e. if the supposition were made that sound-ness is equally produced we would have to expect that the conjunctive *dharma* constitutes a contradictory reason of the *dharmasvarūpaviparītasādhana*-type, if the property to be proven were non-eternality and sound-ness assumed as eternal or the property to be proven eternality and sound-ness supposed as being not-eternal; or, if the *probandum* were non-eternality or eternality and sound-ness were assumed as non-eternal or eternal respectively, we should obtain a valid logical reason. If on the other hand, a conjunctive *probandum* like being both non-eternal and eternal were hypostatized, there would be no similar instances and the reason would be again contradictory and belong to the *dharmasvarūpaviparītasādhana*-type since everything exhibiting producedness plus audibility must lack the property of being both eternal and not eternal. Thus, all theoretical possibilities entail that the complex property of audibility and producedness exhibits some other type of fallacious reason.

or another person(?)) which proves a contradictory attribute with respect to the same substratum and equally fulfills the set of *Trairūpya*-conditions (or: the same set of conditions as its counterpart-reasoning).

V

The cited textual passages of the NP support the hypothesis that the conditions two and three in the theory of this text are restrictive. It has to be noted that none of the arguments which have been gathered from the examined portions of the text is absolutely convincing, if taken in isolation. But as they harmonize with each other and point into the same direction and since there is apparently not a single passage in the NP which contradicts these results it can be regarded as sufficiently substantiated that the explications in the sense of $ES_{-eva}2$ and $ES_{+eva}4$ and of EV2 or EV4 are by far the most probable ones. This fits the expectations one would have in view of the terms *pakṣa*, *sapakṣa* and *vipakṣa*, which in virtue of their linguistic form suggest that the domains denoted by them are disjunct. However, for methodological reasons it would have been inappropriate to base any arguments on the linguistic features of these terms because it is not beyond doubt that the author did not inherit the expressions from the tradition. Therefore the probability that the value which they play in the theory could be different from the value suggested by the linguistic form and which they originally might have possessed is too high.

On the other hand, the question of existential implications of the *Trairūpya*-conditions seems to be in any case unaffected by considerations of the linguistic character of the technical terms. Whereas it was possible to make it probable that the second condition of *Trairūpya* has an existential import the alternative between a *vipakṣa*-condition with and without existential claim, i.e. the choice between EV2 and EV4 has to be left undecided till now. However, there is an author who appears to have been creative more or less at the same time as the author of the NP and who interprets at some place the *vipakṣa*-condition, as if it involves the claim of the existence of *vipakṣa*-instances. Although the differences which are at stake are subtle and for this reason external evidence taken from texts of other authors has to be handled with greatest care, the discussion and criticism of the *Trairūpya*-doctrine in Uddyotakara's *Nyāyavārttika* at least shows that the variant of the *vipakṣa*-condition which entails an existential claim is more than a mere theoretical possibility.

The interpretation of the *Trairūpya*-doctrine in the *Nyāyavārttika*

Uddyotakara hypostatizes at certain places interpretations of the second and the third conditions of *Trairūpya* which correspond to $ES_{-eva}2$ or $ES_{+eva}4$ and EV4. This means that the conditions are taken as both restrictive and involving existential claims. That this is the case emerges from the following facts:

A) The restrictedness of the *sapakṣa*- and *vipakṣa*-conditions

1) Uddyotakara claims on repeated occasions that the Buddhist *Trairūpya*-doctrine is inadequate because it allows for inferences in which the *dharma* which is the logical reason occurs only in a part of the *pakṣa*. According to our author, the reason is a fault of the first condition. However, Uddyotakara cites the following proof as an example of a defective reasoning which allegedly is not ruled out by the theory of *Trairūpya*: "The atoms are not-eternal because they possess odour, like a pot" — *Nyāyavārttika* (NV) 301,3 ad NS 1.1.5; 541,5 ad NS 1.1.35[25] *anityāḥ paramāṇavo gandhavattvād ghaṭavad iti*[26]. The peculiarity of this inference is that the proving *dharma* occurs only in a part = *ekadeśa* of the *pakṣa*, namely in some, but not all atoms. The problem results from the fact that not only propositions with singular subjects, but also propositions with pluralities of subjects, i.e. collections of two or more particulars, are incorporated into the theory of inference by Uddyotakara. In the present case the propositional content of the thesis could be represented by a universally quantified statement, viz. '(x)(x is an atom → x is not-eternal)'. Now, the reproach that such inferences are allowed by the *Trairūpya*-doctrine, if it is not modified, is only valid in so far as restricted variants of the *vipakṣa*-condition or of the *sapakṣa*-condition with *eva* are hypostatized. For the statement that everything which is eternal does not possess odour can only be true if all atoms are excluded from the realm of discourse. The *vipakṣa*-condition as well as the *sapakṣa*-condition containing *eva* is however violated, if taken non-restrictedly, so that in the latter case Uddyotakara's example could not attest what it is meant to attest, namely the inadequacy of the first condition or the need for its modification.[27]

2) Uddyotakara asserts that the *sapakṣa*-condition in the forms: "Being/Occurrence only in that which is similar to this (the *anumeya*)" — *tattulya eva sadbhāvah* — and: "Being/Occurring only in that which is of the same genus/kind" — *sajātīya eva san* — contradicts the first condition of the occurrence

[25] The pages refer to the edition of A. Thakur 1967.

[26] *ghaṭavad* is missing in NV 541,5.

[27] If the *pakṣa* is excluded from the realm of discourse the argument would not at all exhibit a "failure of *vyāpti*", as assumed by H.N. Randle 1930/1976:251, footnote 1. This holds good only for an "absolute *vyāpti*", a *vyāpti* applying to the totality of objects of the universe.

of the logical reason in the *pakṣa*. [28] Furthermore, the statement that the reason is twofold (*dvidhā*, i.e. both occurring and not occurring) only in that which is of the same kind is declared as implying that the logical reason is not twofold in the *pakṣa* and in the realm of dissimilar instances, the *vipakṣa*.[29] If the first condition of *Trairūpya* is modified in such a way that it demands the occurrence of the logical reason only in the *pakṣa*, then, according to Uddyotakara, a contradiction to the second condition is the result.[30] Moreover, the author of the NV says that from the statement that the logical reason is a *dharma* of the *pakṣa* only and nothing else the consequence ensues that the logical reason does not occur in the *vipakṣa*.[31] All these remarks are appropriate only under the premise that the domains of the *sapakṣa* and the *vipakṣa* do not contain the *pakṣa*.

3) The argument: "Everything is eternal, because it is existent" (*sarvaṃ nityaṃ sattvāt*) is characterized as a reasoning in which the property (to be proven) is *asādhāraṇa* and occurs only in the *pakṣa*, whereas there are no similar and dissimilar instances (*tattulyavipakṣau na staḥ*). The logical reason in: "Everything is eternal, because it is shapeless" (*sarvaṃ nityam amūrtatvāt*) allegedly exists only in a part of the *pakṣa* and is without *sapakṣa* and *vipakṣa* (*avidyamānasapakṣavipakṣa*). Regarding the reason in: "Voice and *manas* are eternal, because they are audible" it is said that it exists in a part of the *pakṣa*, is without *sapakṣa* and excluded from the *vipakṣa*, if the assumption that there is nothing eternal is hypostatized in the argument. — See NV 540,3-7 ad NS 1.1.35. The *sapakṣa*- and *vipakṣa*-concepts presupposed here are obviously restrictive.

B) The inclusion of existential claims

1) The inclusion of the existence of *sapakṣas* in the second *Trairūpya*-condition in the form of 'Being/Occurrence in that which is similar to it' — *tattulye sadbhāvaḥ* — ensues from the assertion that the statement of this condition expresses the mere occurrence in the realm of similar instances (see NV 301,15 ad NS 1.1.5). The same allegedly holds good for the condition in the formulation of *sapakṣe siddhaḥ* (see NV 542,6-7 ad NS 1.1.35).

2) Uddyotakara asserts that by the (*Vādavidhi*-)requirement that the reason does not occur without a such (= the *probandum*) the non-occurrence in the *vipakṣa*, but not the occurrence in that which is like that (*tādṛksattvam*) is guaranteed. The context betrays that the expression 'the occurrence in that which is like that' should refer to the second mark of *Trairūpya* (see NV 544,23 - 545,4). It is obviously supposed here that the *sapakṣa*-condition entails an existential

[28] See NV 301,18 ad NS 1.1.5; 542,7; 544,6 ad NS 1.1.35.

[29] See NV 544,9 ad NS 1.1.35.

[30] See NV 301,11 ad NS 1.1.5; 541,24 ad NS 1.1.35.

[31] See NV 542,2 ad NS 1.1.35 *kena gamyamānatvād iti / avadhāraṇena, pakṣasyaiva dharmaḥ sa nānyasyeti gamyate etad iti vipakṣe nāstīty etat na kartavyam iti /*

proposition and is not logically implied by the *vipakṣa*-condition.

3) The author of the *Nyāyavārttika* repeatedly objects against different versions of Buddhist theories of *Trairūpya* that the theory is too restrictive because the postulate of the fulfillment of all the three conditions rules out allegedly correct inferences. But the inferences which are concerned are ones where either *vipakṣas* or *sapakṣas* do not exist. These are inferences with logical reasons which Uddyotakara calls *anvayin* and *vyatirekin* in contradistinction to *anvayavyatirekin*-reasons and which are commonly known as *kevalānvayin* and *kevalavyatirekin*. The author of the NV asserts that in the case of these reasons the third or the second condition of *Trairūpya* would not be fulfilled. — See NV 302,2-7 ad NS 1.1.5; 542,17 - 543,5 and 544,16-18 ad NS 1.1.35. Moreover 538,13 - 540,11 ad NS 1.1.35; 527,13-19 ad NS 1.1.34 and 294,6-11 ad NS 1.1.5. — The reproach made against the doctrine of *Trairūpya* is valid only under the assumption that the conditions two and three demand the existence of *sapakṣas* and *vipakṣas*.

Conclusions

If one sums up all these remarks one obtains the result that the author of the NV hypostatized a version of the *Trairūpya*-doctrine according to which the *sapakṣa*- and *vipakṣa*-conditions are restrictive and imply existential claims. This means that only $ES_{-eva}2$, $ES_{+eva}4$ and EV4 come into consideration. [32]

This outcome has a remarkable consequence regarding the evaluation of Uddyotakara's criticism of the *Trairūpya*-theory. The author of the NV turns out to be inconsistent, if he, on the one hand, brings forward the reproach that the doctrine unduly excludes logical reasons where there are no *sapakṣa*- or no *vipakṣa*-instances, thereby supposing interpretations of the *sapakṣa*- and *vipakṣa*-conditions implying existential claims, but on the other hand objects against possible variants of the second mark which contain *eva* with a noun-phrase in its focus that they render the third condition redundant — see NV 542,7-9; 544,6 ad NS 1.1.35. For irrespective of whether or not one hypostatizes an existential component for the variant containing *eva*, if the *vipakṣa*-condition has to be interpreted in the sense of EV4 it is not logically implied by the *sapakṣa*-condition. One could at best say that the conditions two and three contain logically equivalent components. But Uddyotakara's reproach is not confined to this.

It would be theoretically possible to regard this fact as an evidence for the unfair way in which the author of the NV criticizes the Buddhist theories. On the other hand there is also the possibility that the writer did not realize the inconsistency. The difference between readings involving and not involving

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32 It should be noted that this does not mean that the repeated discussions in the NV of formulations which result from additions of *eva* in the second *Trairūpya*-condition always hypostatize readings implying existential claims and have to be understood in the sense of $ES_{+eva}4$. The question of the actual meanings of the variant formulations which are hypothetically assumed and discussed by the writer of the NV at several places of this text must not be confused with the question as to which conception of the conditions of the *Trairūpya*-theory is assumed by the author as historically correct.

existential claims is subtle enough to escape the attention of an author. After all, the distinctions become fully explicit only if one tries to paraphrase the import of the *Trairūpya*-conditions with the means of predicate-calculus or any other form of expression which urges one to represent the differences in an explicit way. For these grounds there is no sufficient reason to assume that the interpretations of the *Trairūpya*-conditions two and three in the sense of $ES_{-eva}2$ or $ES_{+eva}4$ and EV4 are the result of a conscious distortion of the Buddhist theories.

This must however not be taken as implying that Uddyotakara gives a fully correct picture of the previous *Trairūpya*-doctrines. In all probability the author of the NV can chalk up for himself some achievements in the theory of inference because of the fact the he drew the attention to the phenomenon of reasons which are only partially instantiated by the *pakṣa* and to the phenomenon of inferences and proofs in which the *probandum* is everywhere instantiated and because he was the first one who tried to accommodate the theory of inference to cases where the *pakṣa* consists of a plurality of particulars and to cases where the property to be proven is either not instantiated outside the *pakṣa*(-realm) or exhibited by all particulars. It is indeed questionable whether the accommodation of the theory of inference in such a way that it includes cases with *probanda* which are nowhere instantiated outside the *pakṣa* or are universally instantiated is really justified and we will have to come back to this point later. Nevertheless, Uddyotakara has recognized important differences and raised relevant problems. On the other hand, his criticisms on account of the allegedly internal inconsistency of the *Trairūpya*-theory is almost silly. This holds in particular for his claim that the second condition of *Trairūpya*, if it is extended by *eva* with the noun-phrase *sapakṣe* or some equivalent expression in its focus, contradicts the first requirement that the logical reason must be exhibited by or in the *pakṣa*. His argument presupposes that the import of the *sapakṣa*-condition must be conveyed solely by means of the linguistic expressions occurring within the formulation of the very same condition. But he offers no reasons for the justification of this demand. Therefore the (Buddhist) opponent could retort that the very fact that an obvious incompability with the first *Trairūpya*-condition results together with the fact that the first condition has been explicitly formulated immediately before not only show that the second condition cannot be interpreted in this way, but are also a (non-linguistic) means of conveying that the *sapakṣa*-requirement has to be read with the addition of 'and apart from the *pakṣa*' or any other equivalent phrase. But even if one accepted the demand that no "pragmatic" means should be exploited in formulating the three conditions of *Trairūpya*, that, in other words, the formulation should be fully explicit and the correct interpretation be derivable by syntactical and lexical rules alone, it is still not certain that the reproach of an internal incompatibility of the Buddhist *Trairūpya*-doctrine(s) really affects the theories attacked by Uddyotakara. As regards the *Nyāyapraveśa*, such a reproof would probably miss the target. There are no sufficient grounds to assume that the second condition was meant as containing a restrictive particle according to this text, so that a contradiction with the first condition would result by a strict application of linguistic rules. A variant formulation with *eva* appears in the NP only at a later place after the proper definition of the three "marks" has been presented, whereas the definition of the

sapakṣa-condition formulated in NP 1,9 is, taken literally, synonymous with: "The being existent/occurring (*sat-tvam*) in the *sapakṣa*". It is true that Uddyotakara's criticisms are probably mainly directed against Dignāga's doctrine(s) of *Trairūpya*. But even in this respect it is not evident that Uddyotakara's accusations have a proper basis. At least one can say that there exist in Dignāga's works passages which testify versions of the second *Trairūpya*-condition that do not contain the restrictive particle *eva* and probably are also not meant to be taken in such a sense.

The *Trairūpya*-doctrine(s) of Dignāga

I

Before examining the question of the occurrence of *eva* in the *sapakṣa*-condition we want to show that Uddyotakara's interpretation of the *Trairūpya*-doctrine is not without any basis in Dignāga's works with respect to the restrictive nature and the existential implications of the second and the third condition.

The possibly unnoticed incoherence pointed out in the last chapter should give sufficient reason to reckon with the possibility that there are differences within the views held by one and the same author and to be cautious with transferring results gained from certain textual passages to other textual passages or texts even if both are similar in content. This is all the more so since the differences concerned are sometimes subtle but of great theoretical importance. Therefore one should perhaps not derive much more from the following investigations than that in the works of Dignāga there is *at least also* evidence of a conception of *Trairūpya* according to which the *sapakṣa-* and the *vipakṣa*-conditions are restrictive and possess an existential import, though, in the case of the third condition, possibly a weak one.

II

In the *Nyāyamukha* (NM) and the *Pramāṇasamuccaya* (PS), which belong to Dignāga's main works on logic and epistemology, one finds remarks on the fallacious reason of the already mentioned category '*asādhāraṇa*' which are more explicit than those of the *Nyāyapraveśa*.

In the NM the proof: 'Sound is eternal because of audibility' is associated with the characterization: 'Not occurring in the similar and the dissimilar'.[1] In the PS the inference from audibility to non-eternity of sound is adduced in order to illustrate a case in which only the first and the third *Trairūpya*-condition are fulfilled, but not the second.[2] Both textual passages, taken together, suggest the following picture: Audibility as a property of sound is a logical reason which violates condition two of *Trairūpya* irrespective of whether the *probandum* is eternity or non-eternity.[3] [4] This would fit interpretations of the *sapakṣa*-condition in the sense of $ES_{-eva}2$ or $ES_{+eva}4$. The fact that the evaluation of audibility as a logical reason is identical if eternity or its negative counterpart function as the *probandum* — or that the third condition is declared as being fulfilled in the case of eternity as

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1 See Taisho, vol.32, no.1628 p.2a14-17 and 23 = no.1629 7b1ff. Cf. G.Tucci 1930:26-28.

2 See *Pramāṇasamuccayavṛtti* (PSV) ad PS II 6cd + PS II 7; ed. of Kitagawa 1965:456-457; R. Hayes 1980:253-254.

3 This holds good at least under the assumption that the expression *amūrtaśrāvaṇatvābhyām* in *kārikā* 7 of the PS has to be construed with *anitya(ḥ)*. The Sanskrit-version is cited i.a. in R. Hayes 1980:273, footnote 66.

4 The inference from audibility to eternality of sound also exemplifies the fifth position in the *Hetucakraḍamaru*. (Cf. i.a. E. Frauwallner 1959, "Anhang").

probandum — supports the hypothesis of a restrictive interpretation of the *vipakṣa*-condition.

This assumption is corroborated by the treatment of the fallacious reason of the category *'viruddhāvyabhicārin'* in Dignāga's works. It appears that Dignāga in the same way as the author of the NP conceded the possibility of the existence of two different logical reasons both valid according to the canon of *Trairūpya* and each one proving the negative correlate of what the other proves. In the NM this case is illustrated by the example that someone in the presence of an interlocutor who acknowledges the existence of the universal 'sound-ness' as an audible entity numerically different from sound adduces audibility as a logical reason in order to prove the thesis that sound is eternal, whereupon the counter-thesis is claimed that sound is not eternal because of its producedness. The mere fact that the proof from audibility to eternity of sound is explicitly linked up with the supposition of the existence of the universal 'sound-ness', being an entity different from the *pakṣa* that exemplifies the *probandum* audibility, confirms the assumption that the *sapakṣa*-condition demands as much as it demands according to $ES_{-eva}2$ or $ES_{+eva}4$. But if the two "antinomical" proofs are both correct according to the criterion of the *Trairūpya*-conditions — and there can hardly be any doubt that at least the second of the mentioned proofs, namely the proof of the non-eternity of sound on account of its producedness should be acknowledged as correct by the author of the NM — then there is hardly any other possibility than to accept the hypothesis that the *vipakṣa*-requirement is restrictive, i.e. excluding the *pakṣa* from the realm of its application. The statement that *both* logical reasons within a *viruddhāvyabhicārin*-argument fulfill the three "marks" of a valid reason, if taken separately, is even explicitly formulated in a sentence which is cited in the *Praśastapādabhāṣya* and of which one has assumed that it originates from a work of Dignāga.[5] Furthermore, the wording of the term *viruddhāvyabhicārin* which contains the component *avyabhicārin* harmonizes with that view, as already pointed out in the chapter on the *Nyāyapraveśa*.

In this connection also the circumstance is noteworthy that Dignāga seems to acknowledge the variants of fallacious reasons of the category *'viruddha'* which are named by the terms *'dharmisvarūpaviparītasādhana'* and *'dharmiviśeṣaviparītasādhana'* in the NP.[6]

It is more difficult to decide the question as to whether or not the *vipakṣa*-condition included an existential claim according to Dignāga. There are textual passages which show that Dignāga reckoned with the possibility of the non-existence of *vipakṣas*.

Both in the NM and in the *vṛtti* of the PS one finds a passage in which the

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[5] See PB 581-582 (ed. of Śrīdurgādhara Jhā Śarman, Varanasi 1963 = p.605,1-3 in the ed. of G. Kavirāj, Benares 1930): *ekasmiṃś ca dvayor hetvor yathoktalakṣaṇayor viruddhayoḥ sannipāte sati saṃśayadarśanād ayam anyaḥ sandigdha iti kecit* / See also G. Tucci 1930:31 footn.58; E. Steinkellner 1967b:74 and 202,footn.40; M. Hattori 1972:179. Cf. NM, T 1628:2b11ff = T 1629:7c8ff.

[6] See NM *kārikā* 9 = T 1628:2b27-28 = T 1629:7c23-24; G. Tucci 1930:35. Cf. also PS III 27 = Kitagawa 1965:501. Furthermore, Kitagawa 1965:500a, line 14 and 500b, line 13ff.

question is raised as to how it can be spoken of the non-occurrence of the reason in the *vipakṣa* in case the interlocutor in a discussion does not acknowledge the existence of dissimilar instances, as e.g. if non-eternity is the property to be proven and the existence of ether etc. is not granted. The answer is that in the case of the non-existence of *vipakṣas* the logical reason also does not occur in this realm and no fault exists because there is in no way a doubt here.[7]

A little bit later it is said in the NM that the similar example, the *sādharmyadṛṣṭānta*, is both rejecting/negative and illustrating/affirmative (遮詮), whereas the dissimilar example, the *vaidharmyadṛṣṭānta*, only excludes the "inundation" (止濫) — = *ativyāpti* = the over-extension of the proving *dharma* (?). As both of them make us reach the relevant aim either by *anvaya* or by *vyatireka* it is possible to show by this (= the *vaidharmyadṛṣṭānta* ?) that the *probans* does not occur where the *probandum* does not occur, even if the opponent does not admit that ether etc. exist in reality.[8]

It seems obvious that the author of the NM wanted to allow for the possibility that a proponent can validly prove a thesis even if there are no dissimilar instances according to the view held by his opponent. Especially the last passage makes it furthermore natural to derive the conclusion that only the *sapakṣa*-, but not the *vipakṣa*-condition includes an existential proposition as a component. After all there is also the problem that it should be possible for the Buddhist to prove the non-eternality of sound though he does not admit the existence of anything everlasting. Is this not sufficient reason to ascribe to Dignāga the opinion that someone who validly infers or proves must not always acknowledge the existence of dissimilar instances not exhibiting the *probans*?

Now, it should be noted that even if an interpretation of the *vipakṣa*-condition in the sense of EV3 or EV4 should turn out to be unacceptable with respect to Dignāga it is by no means equally ruled out that the third mark of *Trairūpya* had in (certain phases of) Dignāga's theory a content according to which it contained a weaker variant of the existential proposition included in EV3 and EV4. But the inclusion of a weakened existential requirement would be very significant because in this case an implicative relation between the *sapakṣa*- and the *vipakṣa*-condition would not exist even if one takes into account a version of the second "mark" which contains *eva*. This weakened existential requirement would say that there must be something such that *if* it existed, it would exhibit neither the property to be proven nor the proving property.

It is evident that the phrase 'there is something such that' would not possess the import of the "ontic" existential quantifier '$(\exists x)$' in this case — which occurs in EV3 and EV4. The meaning of this existential claim would not be representable by the means of classical predicate calculus. But possibly it could be represented by the

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7 See NM T 1628:2a17 = T 1629:7b14; PSV (Kitagawa 1965:)492a12,492b12 (ad PS III, *kārikā* 20); Cf. G. Tucci 1930:27.

8 See NM T 1628:2c8 = 1629 8a5. Cf. G. Tucci 1930:37.

"substitutional" existential quantifier.[9] The open sentence behind the existential quantifier should however not contain the material implicator '→' for representing the 'if', for the substitution of names for fictive entities would yield sentences which are eo ipso true and thereby render the existential proposition irrelevant. But if one uses a symbol which is "intensional" in the same way as possibly the English 'if' in the above sentence is, the existential condition should be representable with the help of a substitutional quantifier. Using '(Ex)' for the representation of the substitutive existential quantifier and '⇀' for the required intensional 'if-then' we could differentiate between at least two variants of existential propositions:

E_1) (Ex)(x exists/existed ⇀ (-Sx & -Hx))

E_2) (EF)(an F exists/existed ⇀ (-S that F & -H that F))

E1 would be suited in order to cover *vaidharmyadṛṣṭāntas* like the ether, whereas E2 seems appropriate if examples like sons of barren women, sky-flowers etc., which also play sometimes the role of *vaidharmyadṛṣṭāntas*, are at stake. (An example of the first type of statements would be: "If the ether exists/existed, it is/would be eternal and not produced" and an example of the second type: "If a sky-flower exists/existed, it/that sky-flower is/would be not eternal and not heavier than air").

The reproach that such sentences about "non-existents" cannot possess sufficiently clear criteria of verification should not be as readily accepted as it seems to be done sometimes in the later Indian tradition.[10] Even if it should turn out that the assumption of the verifiability of the weakened existential requirements is not in accordance with certain epistemological tenets of Dignāga's philosophy it would not yet follow that the corresponding interpretation of the *vipakṣa* condition must be wrong. This is not only because the epistemological tenets in question could represent other phases of the theoretical development than certain versions of the *Trairūpya*-doctrine, but holds good also because incompatibilities in this sphere could very easily be overlooked. The example of Uddyotakara showed after all that tensions can arise even within one and the same part of an author's theory and might be exhibited by one and the same text. For this reason the relevance of textual passages not in harmony with some exegesis of *Trairūpya*-theory, if such passages existed, would have to be assessed very cautiously. On the other hand it is worth remarking that the symbol '⇀' used in the above existential proposition as representing some sort of intensional conditional would attain an intuitively

[9] The substitutional existential quantifier is an operator of which the following holds good: The statement expressed by a sentence beginning with a substitutional existential quantifier is true if and only if there is at least one expression such that its substitution in the open sentence following the quantifier yields a sentences which expresses something true. The special properties of the ontic and the substitutional quantifiers are discussed in detail in W. Künne 1983:105ff = chapter 3, §§3-4.

[10] It seems that much of the later criticism against non-existent *vaidharmyadṛṣṭāntas* depends on too naive epistemological tenets, in particular the theorem that verification must be based on cognition by *pramāṇas* and that every(?) cognition has to be a cognition *of* existing objects. (This hangs together with the propensity to ignore the propositional character of (certain kinds of) cognition which seems to have done quite a lot of harm also in the Western tradition).

plausible interpretation if it were understood as being used for the expression of counter-factual conditional propositions that are backed by general laws. This would have an interesting result in the context of the existential requirement of the *vipakṣa*-condition in Dignāga's theory since such a reading could amount to the claim that the citation of non-existing *vaidharmyadṛṣṭāntas* as well as statements regarding them to the effect that if they existed it would not be the case that they do not exhibit the *probandum* but exhibit the *probans* would be justified if a general law supports the claims which are thereby made. Now, the existence of an inseparable connection between *probans* and *probandum* on account of some internal relationship between them which bestows a law-like nature on the fact that whenever the former occurs the latter also occurs would be one possible way in which the law-backing could be realized. But this idea would enable us to forge links not only to the notion of *avinābhāva* as explicated earlier on the basis of Vasubandhu's *Vādavidhi* but also, as it will turn out afterwards, to Dharmakīrti's later theory of *svabhāvapratibandha*.

But is the interpretation of the *vipakṣa*-condition according to which it includes at least a weak existence-postulate more realistic than one which does not have this implication? This can be answered in the affirmative with respect to certain texts of Dignāga in so far as the assumption of some kind of existential import seems more corroborated than the opposite hypothesis.

In the NM it is suggested that in a proof-situation in which the opponent does not acknowledge the real existence[11] of dissimilar instances the giving of an example for the *vyatireka*, the negative concomitance, is nevertheless necessary. The author of the text explains immediately before the above mentioned passage of NM 2c8 = 8a5 a *vaidharmyadṛṣṭānta* in the following way: "Everything, which is eternal, is observed as not ensuing upon effort, like the ether". Although the non-acknowledgment of dissimilar instances on the part of the opponent is made thematic there is nothing in the text which indicates that the citation of a negative example could be dispensed with for other reasons than the fact that the example in question is already commonly known both to the proponent and the opponent, a fact which would rather presuppose the reality of a dissimilar instance and does not invalidate the necessity of its existence. This together with the circumstance that the Nyāya author Uddyotakara in some places argues in a way as if the postulate of the existence of *vipakṣas* in the Buddhist *Trairūpya*-doctrines were a matter of course should suffice to attribute to the interpretation with existential import historical relevance — despite the fact that Uddyotakara possibly misrepresents Dignāga's intentions by hypostatizing a *strong* existential requirement for the *vipakṣa*-condition.

[11] The adjective 'real' is, by the way, not added by us. In NM 2c10 = 8a6-7 the expression 實有 occurs.

III

1

As already mentioned, the question of the existential import of the *vipakṣa*-condition has a bearing on the question of its appropriateness in so far as it is threatened by redundancy in case the second *Trairūpya*-mark exhibits the particle *eva* with noun-phrase focus and the third mark does not contain an existential requirement regarding *vipakṣa*-instances. Both conditions could become even equivalent, if the second mark were taken in the sense of a sentence with *eva* not implying the existence of similar instances which exhibit the proving *dharma*. On the other hand, such dangers would hardly arise if the second condition had the import of $ES_{-eva}1$ or $ES_{-eva}2$, because in this case it would contain nothing more than an existential requirement regarding entities which (are different from the *pakṣa* and) possess the *probans* and the *probandum*. But as these interpretations mainly relate to formulations of the *sapakṣa* condition without *eva* the problem of the redundancy of some components of the *Trairūpya*-canon essentially depends on the genuine form of the second mark.

Since questions of the exact wording of the *Trairūpya*-conditions are very important in this connection it is advisable to concentrate on passages which are either preserved in its original language or at least make it possible to reconstruct the original formulation with more certainty than Chinese translations normally allow us to do. The following discussion will be mainly concerned with PS II 5cd and the corresponding remarks Dignāga makes in his *Pramāṇasamuccayavṛtti* (PVS). The reason is that not only are we in a position to know the original formulation of the relevant verse but the passage concerned is also one of the most pertinent sources for the interpretation of *Trairūpya* being thematically dedicated to the *Trairūpya*-canon and occurring at a prominent place in Dignāga's main work on logic and epistemology.

PS II 5cd together with the corresponding section of the PSV has until recently been taken as testifying a version of *Trairūpya* in which the second condition contains the particle *eva* or as giving evidence that Dignāga intended to attribute to the *sapakṣa*-condition an import identical with the import of a formulation which contains the restrictive particle. We want to show that this assumption is doubtful. This means that there is sufficient warrant for the supposition that at this place the author of the PS intended to present a version of *Trairūpya* in which not only the second mark does not contain *eva* but which also possesses an import which corresponds to $ES_{-eva}1$ or rather $ES_{-eva}2$. If this is true the source of the danger that the third condition could be redundant which has been assumed in the previous secondary literature does not exist. Nevertheless, it can be shown that there is also another possible source of this redundancy-threat which does not require to attribute to the *sapakṣa*-condition the import of a formulation with *eva* and possibly this is the problem which the author of the work had in mind when he discussed the topic of eventual redundancy in the *vṛtti* on PS II 5cd.

Not long ago, it has been explicitly claimed by S. Katsura in his paper "Dignāga on Trairūpya" (Katsura 1983) that it is wrong to attribute to the author

of PS II 5cd a formulation of *Trairūpya* without *eva*. He criticizes H. Kitagawa for advocating such a view and tries to demonstrate that the remarks made in the PSV on PS II 5cd prove that Dignāga aimed at presenting a *sapakṣa*-condition with *eva*. Albeit his criticism appears to be partly justified his positive arguments for his own view turn out to be defective on a closer analysis.

2

The relevant passage of the PS and the PSV runs as follows (H. Kitagawa 1965:455; S. Katsura 1983:15/544):

ćhul gsum rtags las źes gaṅ bstan pa de bśad par bya ste /
rjes dpag bya daṅ de mćhuṅs la // yod daṅ med la med paḥo //
$^{V\rightarrow}$*rjes su dpag par bya ba ni chos kyi(s) khyad par du byas paḥi chos can no // de la mṅon sum mam rjes su dpag pas mthoṅ gi(s) rjes la deḥi rigs daṅ mthun pa la yaṅ spyiḥi ćhul gis phyogs thams cad dam phyogs gcig la yod par grub paḥo*$^{\leftarrow V}$*//*[12] *de gaṅ las źe na / de daṅ mćhuṅs pa kho na la yod pa źes ṅes par gzuṅ baḥi phyir yin gyi yod pa kho na źes ni ma yin no // de ltar na med pa la(m) med do źes brjod pas mi byaḥo źe na / ḥdi ni med pa ñid la med pa yin gyi / gźan pa la ḥaṅ ma yin ḥgal ba la ma yin no źes ṅes paḥi don du ḥgyur ro //* ('$^{V\rightarrow}$.....$^{\leftarrow V}$' indicates that the text follows Vasudhararakṣita's translation)

Katsura offers the following translation of this passage (p.16/543):

(1) The phrase (from Kārikā 1) "through an indicator that has three characteristics" (trirūpāl liṅgataḥ) must now be explained.
(A proper indicator must be) present in the object of inference and in what is similar to it, and absent in what is not (similar to it). (anumeye 'tha tattūlye sadbhāvo nāstitâsati)
The object of inference is a property-locus qualified by a property (which one wishes to know). (dharmaviśiṣṭo dharmy anumeyaḥ)
Having discerned, either through perception or through inference, (the indicator) in the (object of inference), one also establishes in a general manner (*sāmānyena) (its) presence either in some or all loci of the same class (*tajjātīya/sajātīya).
(2) Q: Why is it (that we say "some or all loci of the same class"; why do we not say "all" such loci)?
A: Because we must *restrict* (*avadhāraṇa) (the second characteristic) in the way that (the indicator is) present *only* in what is similar to the (object of inference) (*tattulya *eva* sadbhāvaḥ), not in the way that it is *necessarily* present (in all loci similar to the object of inference) (*tattulye sadbhāva *eva*).
(3) Q: But then nothing (further) is accomplished by stating (the third

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[12] In Kanakavarman's translation we find as a counterpart of these two sentences: *rjes su dpag pa ni chos khyad par can gyi chos can yin te / de la dus phyis chos kyi spyiḥi ćhul gyis mṅon sum [m]am rjes su dpag pas mthoṅ baḥo // deḥi rigs la yaṅ mtha dag gam phyogs cig yod pa ñid do //*

characteristic) that (the indicator is) absent in what is not (similar to the object of inference).
A: It is (stated) in order to determine that (the indicator is) absent in what is not (similar to the object of inference), *not* in what is other than or incompatible with (the object of inference).

The crucial passage which Katsura takes as giving evidence for a version of the *sapakṣa*-condition with *eva* is contained in section number two according to Katsura's structuring. The import of the preceding and subsequent context is relatively unproblematic. The first paragraph (acc. Katsura) represents the following train of thoughts: a) announcement that the phrase 'through an indicator that has three characteristics', which occurred earlier in PS II, *kārikā* 1, has to be explained now and definition of the three *Trairūpya*-marks in *kārikā* 5cd, b) explanation of the term 'object of inference = *anumeya* occurring in *kārikā* 5cd as a property-bearer qualified by a property, c) statement to the effect that after one has discerned (the logical reason as residing) in this property-bearer either by perception or by inference it (=the logical) reason is established as existing in its general form also in that which agrees with the genus/kind of this (property-bearer) (i.e. as occurring in instances which are of the same kind as the *pakṣa* in so far as they also exhibit the general characteristic the possession of which by the *pakṣa* is aimed at being established in the inference or proof in question) either in all or in (at least) one instance.[13] Paragraph 3 represents an objection to the effect that the statement made in the preceding section 2 would entail the redundancy of the third mark of *Trairūpya* = the *vipakṣa*-condition together with an attempt to show that the reproach is not justified.

According to Katsura "one of the reasons, why Prof. KITAGAWA did not approve of the interpretation that the particle *eva* is understood in the second rūpa is that he took the phrase '*only* in what is similar to......' in the sense of 'in *all* loci of the same class'". But Katsura objects that it must be logically equivalent to 'in *some or all* loci of the same class' (cf. Katsura 1983:16/543). Obviously the phrase in question is the equivalent of the expression *(de) daṅ mčhuṅs pa kho na la (yod pa)* which occurs within the section numbered as the second paragraph in the above cited translation of Katsura. Now, it seems that Katsura is right in rejecting the view that this phrase has the import of '(occurring) in all loci of the same class' in the quoted passage of the PSV. For this would have to mean in the present context that the logical reason must occur in all similar instances = *sapakṣas* and would thereby contradict the assertion made in the preceding paragraph 1 to the effect that it is *not* required that the indicator = logical reason is present in all similar instances but must be rather exhibited by at least one member of this set. But why does this prove that "the particle *eva* is understood in the second *rūpa*"?

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13 This probably means nothing else than that the *probans* in its general form has to be exhibited in at least one or possibly even all *sapakṣa*-instances apart from the *pakṣa*. (One should note, by the way, the occurrence of *yaṅ* = "also" which indicates that there must be an instance exhibiting the proving property (together with the property to be proven) that is not identical with the *pakṣa*).

It seems that Katsura — like some other scholars — make the following assumption: In the passage of paragraph two Dignāga expresses the view that the second condition of *Trairūpya* restricts the occurrence of the logical reason to the realm of *sapakṣa*-instances; by this the problem of the superfluousness of the *vipakṣa*-condition is generated. But is the supposition true that Dignāga manifests the opinion that the second characteristic restricts the logical reason to the *sapakṣa*-domain? At this place the subtleties of translating come into play.

3

Katsura translates the sentence: *de daṅ mćhuṅs pa kho na la yod pa źes ṅes par gzuṅ baḥi phyir yin gyi yod pa kho na ni ma yin no* as "Because we must *restrict* (*avadhāraṇa) (the second characteristic) in the way that (the indicator is) present *only* in what is similar to the (object of inference) (*tattulya *eva* sadbhāvaḥ), not in the way that it is *necessarily* present (in all loci similar to the object of inference) (*tattulye sadbhāva *eva*)". Now we can see, how important our convention of bracketing added elements is. For Katsura's interpretation crucially depends on his addition of 'the second characteristic', which he correctly puts into brackets. But in the original text there is no verbal equivalent to this expression and therefore the literal, linguistic meaning of the passage does not betray that the *sapakṣa*-condition is referred to at all in the quoted sentence of the PSV. Now, this fact might be irrelevant if it could be assumed that such an addition is required by the context. But this is, as a matter of fact, not so. First of all, it is not even certain that the expression *ṅes par gzuṅ* has the meaning of "must restrict", as assumed by Katsura. It is equally well possible that it represents a Sanskrit expression that means "(must be) recognized with certainty" or "(must be) ascertained" so that the whole sentence could possess the following literal sense: "It is [so] because it must be ascertained/one must ascertain that it (the logical reason) exists only in what is similar to it, but it is not the case that it exists only (i.e. exists without exception) [in this realm]". Understood in this way, nothing contained in the linguistic meaning of the phrase forces us to suppose that the second mark of *Trairūpya* expresses either explicitly or implicitly that the logical reason occurs only in the realm of similar instances. The phrase only says that the occurrence in the *sapakṣa*-domain only must be ascertained somehow. But it is not even necessary to insist that the expression *ṅes par gzuṅ* has another sense than the one assumed by Katsura. Let us assume that these words can be properly rendered by "we must restrict". In this case some addition that occupies the position of the object seems in fact required. But why must the object position be filled by an expression having the sense of "the second characteristic"? Is it not equally well possible to supplement: "the logical reason" or "the canon of *Trairūpya*"? Thus the sentence would be translatable as follows: "Because one must restrict [the logical reason in the way] that it is present only in what is similar to the [object of inference], but not [in the way that] it is present without exception" (or: "......, but it is not the case that it is present without exception"). Assuming 'the canon of *Trairūpya*' as the object, the sentence could be rendered thus: "Because one must restrict [the canon of the *Trairūpya*-conditions] in the way that [the logical reason] is present only in what is similar [to the object

of inference], but not that it is present without exception (or: "......, but it is not the case that it (the logical reason) is present without exception)". In this way we can get a different sense even if we deviate only minimally from Katsura's translation. The point of the change lies in that according to the latter interpretations of the sentence it would express a proposition which only entails that it must be made sure that the occurrence of the logical reason becomes restricted to the *sapakṣa*-domain but not that the fulfillment of this requirement is provided for by the second condition and only by this condition.

A natural assumption would be that the second and the third condition *together* guarantee that the logical reason occurs in at least one similar instance apart from the *pakṣa* and only there, i.e. never in the *vipakṣa*-domain. This supposition seems even unavoidable as long as one does not admit that the *sapakṣa*-condition possesses the import of a formulation with *eva* and hypostatizes an interpretation in the sense of $ES_{-eva}1$ or $ES_{-eva}2$. This would however best harmonize with the wording of the *kārikā* 5cd that gives the definition of the *Trairūpya*-marks and does not contain *eva*, neither according to the Tibetan translations nor to the Sanskrit version in Uddyotakara's *Nyāyavārttika* that is believed to represent a quotation of PS 5cd — namely: *anumeye 'tha tattulye sadbhāvo nāstitā 'sati.*[14]

But at this place the following objection might be raised: If the second condition does not contain *eva* and is not meant in the sense of a formulation with *eva* either, how should it be explained that Dignāga discusses the possibility that the third condition is redundant? The answer is: Dignāga indeed recognized the danger that the *vipakṣa*-condition could become superfluous, but he did not mean that the redundancy results from the fact that the *sapakṣa*-condition entails the *vipakṣa*-condition.

First of all, it should be realized, how awkward the position of Dignāga and how maladroit his manoeuvres to handle the situation would be, if Katsura's and similar hypotheses were correct. If the import of the *sapakṣa*-condition were identical with a formulation containing *eva* the first awkwardness would have been the formulation of the *kārikā*. The author of the PS would have expressed the *sapakṣa* requirement in a way which does not betray its real import just at the place where it should be explained. Either a commentary or a lot of special background knowledge would have been necessary in order to gather from the formulation the propositional content which it is intended to represent. For without such additional information the only natural way to read the phrase *tattulye sadbhāvo / de mćhuṅs la yod* would be a reading in a sense of ES_{-eva}. But that is not all. Precisely by the demand to read the formulation in an unnatural way making its import equivalent to that of a formulation with *eva* the writer of the PS manoeuvres himself into a situation which he has greatest difficulties to cope with. For as long as the import of the *sapakṣa*-condition is as it most naturally corresponds to a formulation without *eva*, if it is taken for example in the sense of $ES_{-eva}1$ or $ES_{-eva}2$, the thought that the *vipakṣa*-condition should be redundant appears preposterous. Why should Dignāga

[14] In NV 301,2 (ad NS 1.1.5) *anumāne* appears, which is however supposed to be incorrect for *anumeye* (cf. also R. Hayes 1980 270, footnote 60).

have chosen a *sapakṣa*-condition with the import of a formulation with *eva* when the possibility was open to him to spare himself a lot of trouble by establishing a condition with the import of, say, $ES_{-eva}2$? The only objective reason could be that an existential import of the second condition should be avoided. For a formulation with *eva* which according to its linguistic meaning is equivalent to 'The logical reason exists only in the/a *sapakṣa*' indeed *could* express a proposition without existential import, as e.g. the proposition corresponding to $ES_{+eva}2$. But if that were Dignāga's intention his linguistic behavior should appear even odder. In this case it would have been even less appropriate to omit *eva* in the formulation of the *kārikā*, because an interpretation without existential import like $ES_{+eva}2$ is most unnatural for a formulation not exhibiting the particle. But there is still something else. If the second condition of *Trairūpya* should not have had the implication that there are *sapakṣa*-instances which exhibit the proving property, if e.g. it should be taken as equivalent to $ES_{+eva}2$, another redundancy would become imminent: the second condition would be entailed by the third mark of *Trairūpya*. All interpretations that have to be seriously taken into consideration for the *vipakṣa*-condition logically imply $ES_{+eva}2$. Now one might think of the possibility that Dignāga's behavior should be explained by historical obligations, which means by the circumstance that the traditional *Trairūpya*-doctrine which the author of the PS inherited exhibited a version with *eva* and that for this reason he was not free to give the *sapakṣa*-condition the import of $ES_{-eva}1$ or $ES_{-eva}2$. But it appears that this way out does not lead us very far. First of all, there is no evidence for the assumption that the tradition before Dignāga unanimously advocated a *sapakṣa*-formulation with *eva* — see also S. Katsura, "On *Trairūpya* Formulae", p.165ff. Secondly, the supposition that Dignāga should have been bound by tradition to this extent does not seem very probable. After all, the author of the NP did not hesitate to present a *Trairūpya*-definition without *eva*, and we will see in the next chapter that also Praśastapāda in his *Praśastapādabhāṣya* (or: *Padārthadharmasaṃgraha*) not only formulated the second condition without *eva*, but obviously also intended that it should be understood in such a way. Therefore the readiness of scholars to ascribe to the author of the PS the opinion that the second condition of *Trairūpya* is equivalent and should be taken as equivalent to a formulation with *eva* again exemplifies a shortcoming which is still quite common: the omission to examine which consequences regarding the reasonability of the *behavior* of the author(s) of the investigated text(s) ensue from the interpretational hypothesis one wants to uphold.

But even if the hypothesis does not appear very attractive that Dignāga wanted the second *Trairūpya*-condition as formulated in PS II 5cd to be understood in the sense of a formulation with *eva* and the constituent *tattulye/de mćhuṅs la* in its focus, it would be still possible that the author of the PS envisaged the *possibility* of such a formulation in the quoted passage of the PSV. One might therefore be tempted to play with the thought that Dignāga's remarks on PS II 5cd contain the following sequence of thoughts: **α**) assertion to the effect that it has to be only ensured (by the set of *Trairūpya*-conditions) that the logical reason occurs in the *pakṣa* and at least in one similar instance, but not in all similar instances; **β**) contemplation of a formulation of the *sapakṣa* condition with *eva* and *tattulye* in its

focus as an alternative version of the second mark of *Trairūpya* and raising the objection that this alternative possibility would render the third condition superfluous with the consequence that the version actually adopted by the author of the PS exhibits excessive long-windedness because it misses the opportunity to lump conditions two and three together; γ) dismissal of the objection by the argument that the third condition would be required also under the alternative circumstances.

The proposal to understand our textual passage in this way is beset with some not insignificant difficulties, although there seems to be no knock-out consideration to dismiss this possibility entirely. The principal problem lies in that the crucial fact that an alternative to the *sapakṣa*-version exhibited by the *kārikā* 5cd is envisaged has not been indicated by any means in the text. If not earlier, a corresponding hint should be expected at least in the passage which represents the objection, i.e. in paragraph 3 according to Katsura's segmentation. The objection runs however as if the redundancy would result immediately from what has been stated before and not as if the threat of superfluousness emerges because what has been said before opens a possibility which would entail the redundancy of the *vipakṣa*-condition. But also the preceding sentence *de daṅ mćhuṅs pa kho na la yod pa źes ṅes par gzuṅ baḥi phyir yin gyi yod pa kho na ni ma yin no* = "It is [so] because it has to be ascertained (or: restricted in the way) that it (the logical reason) occurs only in what is similar to it, but it is not the case that it only occurs [there]" in no way suggests that an alternative version of a *Trairūpya*-condition is taken into consideration. Moreover, the answer which is given to the charge of redundancy is formulated in a way which suits much better an objection to the effect that the *Trairūpya*-canon in its *actual* form contains redundant elements than an objection which says that the canon could also be formulated in a more concise way. Otherwise one should rather expect that the answer emphasizes the fact that the objection is invalid even with respect to *Trairūpya*-versions which are different from the actually adopted one. However, even if one accepted the proposal according to which Dignāga refers in the PSV to an objection resulting from the possibility of a modification of the second *Trairūpya*-condition the fact would persist that the second mark of *Trairūpya* in its actual form would exhibit a version without *eva* and should possess a corresponding import.

At this place it is important to become aware of the fact that even a modified version containing *eva* behind *tattulye* does not necessitate the consequence that the *second* condition of *Trairūpya* is not identical with an *eva*-free version. For this consequence only results from the additional premise that the focus of *eva* is constituted by *tattulye* and only by this expression. There is, however, no linguistic consideration which forces us to accept that supposition. The focus of *eva* in the phrase *anumeye 'tha tattulya eva sadbhāvaḥ/rjes dpag bya daṅ de mćhuṅs (pa) kho na la yod pa* could also be constituted by the whole string of words standing in front of *eva*, i.e. *anumeye 'tha tattulya*. This would even yield a plausible sense. The phrase could be rendered by: "The occurrence [of the reason] only in the *anumeya* and in what is similar to it". This amounts to the requirement that the logical reason occurs in the *pakṣa* and in at least one similar instance, but not elsewhere. This fact is significant in different respects. First, it shows that

formulations containing *eva* behind *tattulya* or other expressions referring to the *sapakṣa*-domain are not necessarily as unambiguous as it is sometimes suggested by scholars. The interpretation according to which *eva* changes the import of the second condition of *Trairūpya* represents merely one possible option in cases of formulations like that of PS II 5cd where the syntactic structure is such that the focus of *eva* could be equally well constituted by a complex, coordinated noun-phrase.[15] The possibility of the alternative analysis regarding the focus of *eva* should be generally kept in mind whenever the question of the import of *eva* behind an expression referring to the *sapakṣa*-domain is at stake. But in the present context it is still more important that the same import which would be conveyed by *anumeye 'tha tattulya eva sadbhāvaḥ* with the coordinated noun-phrase in the focus of *eva* could be also conveyed by the very same phrase without *eva*.

This is so because a certain import can sometimes be conveyed either by linguistic or by non-linguistic, if we want to put it in this way, by "pragmatic" means. Such a situation is also instantiated in the case of uses of sentences of the form 'A is F' whenever it can be taken as presupposed that the utterer intended (and was perhaps even sufficiently enabled) to specify in his utterance the complete set of things which instantiate the predicate in question (the complete set of things which are F). Now, in the present case where the author of the text aims at announcing the canon of *Trairūpya*-conditions it is essential that he gives a *complete* specification of the instances where the logical reason is allowed to occur. But since the doctrine of *Trairūpya* possesses the character of a stipulation there is hardly any room left for the possibility that he is unable to give a full specification on account of some lack of knowledge. For these reasons one is entitled to hypostatize in the present context both the intention and the ability to give a complete specification of all possible instances of the occurrence of the logical reason. But it follows from this that an utterance of the phrase *anumeye 'tha tattulye sadbhāvo* could in fact be correctly used at the place where it occurs in order to convey the very same proposition which would also be conveyed by the formulation *anumeye 'tha tattulya eva sadbhāvo* with a coordinated noun-phrase in the focus of *eva*. The only difference consists in that the function which in one case the particle *eva* plays has been taken over by the circumstance that the intention and the capability for a complete specification can be presupposed; instead of using the particle *eva* as a linguistic means the utterer uses the circumstance that it must be evident for the addressee that all possible cases of the occurrence of the logical reason should be specified as a non-linguistic, "pragmatic" means of conveyance. Now, even if we do not suppose that the author of the PSV was aware of the real source of the fact that the formulation *anumeye 'tha tattulye sadbhāvaḥ* can in the present context have the same import as the phrase *anumeya 'tha tattulya eva sadbhāvaḥ* with the coordinated noun-phrase in the particle-focus it might be realistic to assume that he was aware

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[15] The situation would, however, be different regarding a formulation like the one we find in NP 1,9 *pakṣadharmatvaṃ sapakṣe sattvaṃ*. Here the focus could not consist in a coordinated noun-phrase if *eva* were added behind *sapakṣe*. In order to make this possible it would be necessary to replace *pakṣadharmatvaṃ* by other expressions, e.g. to substitute it by *pakṣe tathā* or *pakṣe 'tha* etc.

of the fact itself. But even if Dignāga should not have had any thought regarding the relation between the two formulations when he wrote this passage he might have correctly discerned that to *say*: *anumeye 'tha tattulye sadbhāvaḥ* is suited to convey the import that the formulation with *eva* and complex noun-focus, *as a matter of fact*, would convey.

Now we are in the position to understand, why the author of the PSV could have seen the danger that the third condition might be redundant even on the basis of the hypostatization of an *eva*-free version of the second *Trairūpya*-condition. The expression *anumeye 'tha tattulye sadbhāvaḥ*, if it is used in the present context alone, i.e. without any further information regarding the occurrence or non-occurrence of the logical reason, would by virtue of both linguistic and non-linguistic, "pragmatic" rules convey the same import which the English cleft-sentence: 'It is only in the *pakṣa/anumeya* and the *sapakṣa*/the realm of similar instances where the logical reason occurs at all' conveys according to its most natural reading. The very fact of not giving further information regarding the occurrence of the logical reason is in this case a means of communicating that the logical reason does not occur at all outside the domain that comprises both the *pakṣa* and the *sapakṣa*-instances. This is so because the existential import represented by *sadbhāvaḥ* is a minimal one in the sense that it postulates the mere occurrence in at least one instance. But now we can also understand why Dignāga obviously believed that the statement which he made in the sentence *de daṅ mćhuṅs pa kho na la yod pa źes ṅes par gzuṅ baḥi phyir yin gyi yod pa kho na ni ma yin no* and which amounts to the claim that the logical reason must be exemplified, apart from the *pakṣa*, by at least one *sapakṣa*-instance, creates the problem of a possible redundancy of the *vipakṣa*-condition. For this statement clarifies that the existential import represented by *sadbhāv(aḥ)* is a minimal one, but the application of the principle of the complete specification of the occurrence of the logical reason yields under this circumstance that the logical reason must not occur *at all* outside the realm of *pakṣa* and *sapakṣa*. This is exactly what the third *Trairūpya*-condition demands, if it does not involve the requirement of the existence of *vipakṣas* (which do not exhibit the logical reason). The situation would be different, if the existential import were maximal, i.e. if it consisted in the occurrence in all members of a domain. The predication would be 'the logical reason occurs in all instances of x' instead of 'the logical reason occurs in at least one instance of x' with the consequence that the hypothesis that *pakṣa* and *sapakṣa* exhaust all cases where the predication applies would yield the implication that it is not the case that the logical reason occurs in all instances of *vipakṣa* (instead of: the logical reason does not occur at all in the *vipakṣa*-domain). Thus the *vipakṣa*-condition would *not* be redundant because it makes sure that it is not only excluded that the logical reason occurs in all instances of *vipakṣa* but also that it does not occur there at all.[16]

[16] As the PS possibly represents a theory of inference where it is presupposed that a thesis has always the logical form of 'a is F', i.e. it consists in a singular proposition in which some property is attributed to one particular entity, the difference between minimal and maximal occurrence-demand might be neutralized with respect to the first *Trairūpya*-condition. It would however be consistently possible to

We can excellently understand Dignāga's preoccupation about the possible redundancy of the *vipakṣa*-condition on the basis of the assumption that the second mark of *Trairūpya* did not contain *eva* and that it was meant to be taken in the sense of either $ES_{-eva}1$ or $ES_{-eva}2$. But this saves us a lot of trouble. As this interpretation does not force us to assume any deviance between the formulation of *kārikā* 5cd and the one presupposed in the discussions of the autocommentary on it or a difference between the most natural reading and the real import of certain formulations, there is nothing which we have to explain away.

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There remains only the problem to make Dignāga's rejoinder to the charge of the superfluousness of the third *Trairūpya*-condition intelligible. For it could seem that our proposed interpretation runs into difficulties on account of the answer which is given in the PSV to the objection. S. Katsura renders the phrase *nāstitāsati/med la med paḥo* by "and absent in what is not (similar to it)". This would mean that the third *Trairūpya*-condition has the function to guarantee that the logical reason does not occur in any instance to which the characterization 'it is not similar to the object of inference' applies. But is this not already involved in the proposition that the logical reason occurs only in the *pakṣa* and in that which is similar to it, which we claimed as the import of the formulation *anumeye 'tha tattulye sadbhāvaḥ* if it were used without further information regarding the occurrence or non-occurrence of the logical reason?

First of all, it has to be noted that the view according to which Dignāga envisaged the alternative version of the second condition with *eva* runs into the same difficulty. Even if Katsura (and others) were correct with the claim that according to the author of the PS the second mark of *Trairūpya* means that the logical reason occurs only in what is similar to the object of inference it must be

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apply the notion of minimal occurrence-requirement to a theory which conceives also the *pakṣa* as a domain. It suffices to hypostatize that any thesis has the logical form of a minimal existential claim, i.e. that the claim involved in a thesis amounts to the occurrence of the *probandum* in at least one instance of the *pakṣa*. This means nothing else than that the general form of a thesis would correspond to: '$(\exists x)(Px \& Hx)$'. Singular propositions of the above described kind would constitute merely a special case of the general form resulting by substituting '$=p$' ("is identical with the *pakṣa*") for 'P' in the above schema. Accordingly, the first requirement of *Trairūpya* could be formulated as: "The reason (actually) occurs at least somewhere in the *pakṣa*/at least in one instance of the *pakṣa*". As soon as the thesis is taken as exemplifying the logical form of an existential proposition and not as a universal proposition or a universal *plus* existential proposition there is no need for a stronger requirement regarding the occurrence of the logical reason in the *pakṣa*. In particular it is not necessary to formulate the first *Trairūpya*-condition as: 'occurrence everywhere in the *pakṣa*' or 'occurrence in all instances of *pakṣa*'. (It is indeed true that the argument: 'Some atoms are non-eternal, because they possess odour, like a pot' appears intuitively not less inappropriate than the argument: 'All atoms are non-eternal, because they possess odour, like a pot'. However, this fact points to a more fundamental problem of the theory of inference, which pertains even to cases where the thesis has the form of a singular proposition. The appropriate way of ruling out these inferences is therefore not to stipulate — as Uddyotakara does — that the logical reason must occur in the whole *pakṣa*-realm).

entailed by this theorem that the logical reason does not occur in what is not similar to the object of inference. The difficulty appears even greater for Katsura's than for our proposal because according to the former one the entailment would result more directly from the literal meaning of the formulation. Despite the fact that the interpretation of *nāstitāsati* in the sense of "absence in what is not similar to it" is linguistically a very natural, perhaps even the most natural one in the given context it should be given up because of the undesirable objective consequences it involves. Thus the expression *asati* should not be taken as representing a participle of the copula 'to be', but as a negated present participle of the verb 'to be' = 'to exist'. This is obviously also the view of the Tibetan translators who used *med pa* in order to render this expression. Dignāga's rejoinder would become in any case much more plausible if the *vipakṣa*-condition would say that the logical reason never occurs whenever the *probandum* is absent.

But is it realistic to assume that the phrase *nāstitāsati* could express this idea without inadequacies of expression? To be sure, the interpretation of *asati* as a participle of an existence-verb does not present any problem. (The expression *nāstitā* possesses in any case a derivation of the existential verb √*as* as its component). But it is not possible to gather the information required for supplementing the ellipsis from the immediately preceding constituent *tattulye sadbhāvo*, in contradistinction to Katsura's analysis of *nāstitāsati* in the sense of "absence in what is not similar to it", where the component 'similar to it' corresponds to *tattulye*. One can claim, however, that the expression *anumeye* which is separated by only four words from *asati* allows one to reconstruct the implicit logical subject of the existence-predicate. Nevertheless, there is still some problem. The subject required for the supplementation must be an expression which has the sense of 'the property to be proven'. Now, *anumeya* indeed *can* possess this sense, but it seems that in the *kārikā* 5cd it occurs in the meaning of 'the substratum of the property to be proven = the *pakṣa*'. Perhaps the consequence can be accepted that the author of the PS invited the reader to take the word *anumeya* in two different senses for the interpretation of the verse, first in the sense of 'substratum of the property to be proven' at the beginning of the *kārikā* and later in the sense of 'property to be proven' for the supplementation of the logical subject of the existence-predicate represented by *asati*.

Nonetheless, it is worth mentioning that even this consequence might be avoidable. There is the possibility to take the expression *anumeye* at the beginning of the verse in the sense of 'the property to be proven'. This is possible if we understand the phrase *anumeye....sadbhāvo* not in the sense of 'existence/occurrence *in* the *anumeya*' but as 'existence/occurrence *at* [the place of] the *anumeya*. Thus the string of expressions: *anumeye 'tha tattulye sadbhāvo* could be translated in the following manner: "The existence/occurrence [of the logical reason] at [the place/the substratum of] the property to be proven as well as in that which is similar to this [place/substratum]". In this way the phrase in question might be traced back to a more explicit "deep-structure"-sentence like the following one: "The logical reason occurs in the substratum where the property to be proven or inferred has to be established as occurring as well as in at least one instance which is similar to this substratum". There remains only the (perhaps not unsurmountable) problem

that now no exactly fitting antecedent exists for the pronoun *tat* in *tattulye*, which should refer to the substratum of inference.[17] If one wishes to maintain that both the *tat* of *tattulye* and the logical subject of *asati* have an explicit antecedent in the *kārikā* the best solution seems to assume that the author of the PS wanted the expression *anumeye* to be understood in *both* possible meanings with the consequence that the phrase *anumeye....sadbhāvo* has to be read both in the sense of 'the occurrence in the *anumeya*/substratum of inference' and 'the occurrence at the *anumeya*/property to be proven'. This as well as the preceding options are admittedly artificial to some extent, but it seems that these consequences should be accepted because the interpretation of *asati* as the negated participle of the verb 'to exist' which creates those intricacies is superior to the analysis advocated by Katsura that hypostatizes a derivation from the copula 'to be'.

On the basis of the "existential" interpretation both the problem of the need of further specification and its proposed solution become intelligible. The phrase 'that which is similar to the substratum of inference' does not by itself betray, which kind of similarity is required. It could be a strong similarity which demands agreement in all respects. But it could equally well be a very weak form of similarity which merely requires the non-presence of some property that is opposite to the property to be proven. In the first case all particulars which are different in at least one respect would belong to the realm of dissimilar instances, whereas in the second case only things exhibiting opposite properties would pertain to that domain. But the formulation of the *vipakṣa*-condition *nāstitāsati* makes clear that the logical reason must not occur whenever the property to be proven is absent and can in this way disclose that the similarity referred to by the expression *tattulye* consists in nothing but the fact that the property to be proven is instantiated, if the expression *asati* is interpreted as being derived from the existence-verb.

But all this might still raise the following doubt: Why did the author of the PS resort to such a queer formulation of the *sapakṣa*-condition which needs to be explicated by the formulation of the third mark of *Trairūpya*?. Precisely if what has been said by us above should be correct it seems that one should expect Dignāga to reduce the number of *Trairūpya*-conditions to two by formulating the second condition in a less unambiguous way. As we can see from the *Nyāyapraveśa* the possibility exists to use some technical term like *sapakṣa* which can be backed by

[17] Linguistically there is also the possibility to interpret the expression *tattulye* in the sense of 'in that which is similar *by* that (i.e. by the property to be proven)'. This would mean that the *sapakṣa*-instances would be referred to by the characterization of being similar to the *pakṣa* insofar as they equally exhibit the *probandum*. But this does not appear to be Dignāga's intention. Otherwise it would be difficult to understand why the third *Trairūpya*-mark should be needed in order to determine the correct import of the formulation *tattulye sadbhāvo*. (On this basis the only possibility of its playing such a role could be that the formulation of the *vipakṣa*-condition *nāstitāsati* lays down the correct linguistic analysis of the compound *tattulye* — that it has to be taken in the sense of 'which is similar by that' and not 'which is similar to that'. Albeit no absolutely incontrovertible evidence exists that the author of the PSV cannot have meant this by his remarks regarding the proper function of the *vipakṣa*-condition, it remains very doubtful that he had that possibility in mind and therefore we should not base our analysis on the assumption that this was what Dignāga actually intended to say).

a definition that fixes its reference to the domain of entities different from the *pakṣa* and exhibiting the property to be proven. But the term *sapakṣa* must have been known to the author of the PS since it is used earlier in Vasubandhu's *Vādavidhāna*, a work with which Dignāga certainly should have been well acquainted[18]. In view of the considerations we attributed to the author of the PS it might therefore appear surprising that he did not decide to formulate the requirements for a correct logical reason for example in a manner like this: *anumeye sapakṣe ca sadbhāvo* or: *sapakṣapakṣayor eva sadbhāvo* etc. There would have been the possibility to spare the third condition. But perhaps Dignāga's priorities were exactly the opposite: His principal intention was not to reduce the number of conditions and to use as far as possible traditional concepts in order to achieve this aim, but to preserve the traditional doctrine of the three marks of *Trairūpya* and to find a new adequate formulation which fits the desired number. This hypothesis would at least have the merit of sparing us the dubious supposition that the peculiarities of the formulation of the *Trairūpya*-conditions in PS II 5cd stem from "metrical constraints". If it really is true that the author of the text intended to furnish a formulation adequate to the theory of the threefold reason his device would have consisted in representing the content of the technical terms *sapakṣa* and *vipakṣa* by corresponding non-technical descriptions which elucidate and thereby require each other, and one should say that in this case his move would have been quite ingenious.

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However that may be, there should not be sufficient reason to question our proposal regarding the interpretation of PS II 5cd on account of the fact that it entails the improbability of the occurrence of the formulation which is exhibited by the investigated textual passage.

But two things should still be noted. First there is some indication for the fact that Dignāga did not take the third condition in the sense of EV4. That the author of PS II 5cd did not attribute an existential implication to the *vipakṣa*-condition could be gathered from the circumstance that his preoccupation with the possible redundancy of the third *Trairūpya*-mark would be less founded in this case together with the fact that Dignāga nowhere alludes to the thought that the possibility of redundancy does not exist because the implication of the existence of dissimilar instances not exhibiting the logical reason is not contained in the idea that the logical reason occurs only in the *pakṣa* and some similar instance. Nevertheless, this indication is not entirely incontrovertible. There is no absurdity in the idea that some author does not become fully aware of all the implications which his theory objectively possesses and that he does not realize at certain moments all objectively possible rejoinders to some objection. Moreover, it cannot

[18] The term *sapakṣa* appears even in a phrase which closely resembles the formulation of the second condition in the NP. The sentence in which the phrase occurs seems to have read: *yo dharmaḥ pakṣasya sapakṣe siddho vipakṣe nāsti*. Cf. E. Frauwallner 1933:301.

be entirely ruled out that Dignāga was actually aware of the possibility to counter the charge of redundancy by putting forward the existential implication of the *Trairūpya*-condition, but that he did not consider it as the best strategy to rebut the attack in this way. After all, the idea of the requirement of the existence of *vipakṣa*-instances (not exhibiting the *probans*) would not yield sufficient justification for formulating the *vipakṣa*-condition in the way as it occurs in the *kārikā* 5cd. Nevertheless, one might maintain that it supports the supposition that the author of the PS did not lay emphasis on the existence of a strong existential import of the third *Trairūpya*-condition and thus harmonizes with the hypothesis that the *vipakṣa*-condition should be taken either with no existential implication at all or as possessing the weaker existential requirement discussed above and possibly representable by substitutional quantifiers.

Regarding the second *Trairūpya*-mark our text gives some evidence for the assumption that $ES_{-eva}2$ should be given preference in comparison with $ES_{-eva}1$. If the second condition demanded merely the occurrence of the logical reason in the domain comprising both the *pakṣa* and other similar instances, thereby requiring that the logical reason must occur either in the *pakṣa* or in some other similar instance, this mark could be dispensed with. It would be automatically fulfilled by the fulfillment of the first *Trairūpya*-condition. But the idea that the logical reason is *allowed* to occur also in some similar instances could be equally well gathered from the *vipakṣa*-requirement, if it were used in combination with the first *Trairūpya*-condition. For if the theory which fixes (the) criteria of a correct logical reason would have said that the reason must occur in the *pakṣa* but cannot occur in any dissimilar instance, it could be easily derived that no restrictions regarding the occurrence or non-occurrence of the logical reason in the realm of the similar instances (apart from the *pakṣa*) are intended. Thus it would have sufficed to formulate the first together with the third requirement alone — possibly with some addition making explicit that the concept of non-occurrence with respect to the *vipakṣa*-realm is a strict one (requiring the non-existence in all instances of the domain).

In conclusion we are allowed to say that the passage of PS II 5cd together with the corresponding explanations in the PSV give most support for the hypothesis that the second condition of *Trairūpya* possesses the import of $ES_{-eva}2$ and that the third condition is equivalent to EV2 or a variant of it with weak existential import.

IV

We do not want to claim that Dignāga never conceived in his works a version of the second *Trairūpya*-condition with *eva*. In order to find out which theorems were envisaged in all the cases which exhibit references to the *Trairūpya*-doctrine and whether Dignāga's conceptions were always uniform and consistent further studies are needed, especially more investigations on the *Pramāṇasamuccaya*. We have till now only shown that one of the most prominent passages in Dignāga's works explicitly dedicated to *Trairūpya*, which has been often regarded as a clear evidence for a conception of the *sapakṣa*-condition corresponding to a formulation with *eva*, does not at all prove that the author of the

PS had any other version of the second mark of *Trairūpya* in mind than one that conforms to formulations without the particle *eva* and which might possess the import of $ES_{-eva}2$. Our considerations regarding PS II 5cd and the corresponding portions of the PSV possess, however, some methodological relevance regarding the interpretation of the *Trairūpya*-doctrine and the second condition in particular.

First it has to be realized that no final statements regarding formulations with *eva* can be ventured as long as the focus of the particle has not been properly determined. This is especially relevant with respect to possible occurrences of *eva* within phrases that represent formulations of the second mark. One cannot infallibly deduce the existence of an *eva*-containing version of the *sapakṣa*-condition from the occurrence of *eva* because there is the possibility that a larger unit than a constituent of the phrase expressing the second *Trairūpya*-mark is the focus of the particle. If the whole expression representing the first two *Trairūpya*-conditions constitutes the particle-focus the most probable interpretation is that the logical reason must occur in the *pakṣa* and in at least one member of the domain of similar instances (apart from the *pakṣa*), but nowhere else. But this does not only mean that the particle cannot be assigned to the second *Trairūpya*-condition in particular but it also allows for the possibility that the content of the second mark is that of either $ES_{-eva}1$ or $ES_{-eva}2$. In this case the informative import of *eva* can be identified as the notification of the fact that the first and the second *Trairūpya*-conditions together give an exhaustive specification of the range of possible occurrences of the logical reason.

Secondly, and this is probably yet more important, the above considerations show that passages revealing the view that it is necessary to restrict the occurrence of the logical reason to *sapakṣa*-instances, apart from the *pakṣa*, have to be taken with care regarding their consequences for the proper interpretation of the *sapakṣa*-condition. This holds even good if the passages in question suggest that the restriction is or must be effectuated by the doctrine of *Trairūpya*. It is overhasty and imprudent to derive from this alone that the second condition of *Trairūpya* contains *eva* or is equivalent to a formulation which exhibits this particle. It is too naive to conclude in this manner because from the fact that the canon of *Trairūpya* possesses (among others) the function to guarantee that the logical reason can only occur in the *sapakṣa*-domain (apart from the *pakṣa*) it does not stringently follow that especially the second *Trairūpya*-condition alone fulfills this function. This fallacy is akin to a fault which is not uncommon in linguistics and philology, namely to derive from some import conveyed by a whole sentence in which an expression occurs whose meaning one wants to investigate the conclusion that the particular constituent-expression possesses the semantic function of conveying this import. But even if one had evidence to the effect that the second *Trairūpya*-condition in particular is assigned the function to establish that the logical reason occurs only in *sapakṣa*-instances it is not legitimate to deduce from this that the second mark of *Trairūpya* has to be interpreted in the sense of a version containing *eva*. For such a derivation would rest on a confusion between the *function* and the *content* of the condition in question. The theorem that the logical reason occurs only in *sapakṣa*-instances (apart from the *pakṣa*) could be divided into two components consisting a) in the proposition that the logical reason occurs in some (at least one) *sapakṣa*-

instance and b) in the proposition that the logical reason does not occur at all in what is not a *sapakṣa*-instance (apart from the *pakṣa*). This decomposition would be adequate under the assumption that the sentence of the form 'Only A is F' is used in a way as such sentences are not seldom used, namely as implying the corresponding proposition of the form 'A is F'. In this case the second *Trairūpya*-condition could be justifiedly assigned the *function* to establish that the logical reason occurs only in *sapakṣa*-instances, if its *content* were identical to the proposition that the logical reason occurs in some (at least one) *sapakṣa*-instance and corresponded to $ES_{-eva}2$. It can fulfill this function in virtue of the fact that it guarantees by its content the first component a) of the theorem which in combination with the proposition b) that the logical reason does not occur at all elsewhere (apart from the *pakṣa*), which is identical with the *vipakṣa*-condition or implied by it, yields the theorem of the occurrence in the *sapakṣa*-domain only. The step from the assignment of a function to a corresponding content is fallacious in our case because there is no guarantee that the function can only be of a direct nature and is the immediate result of the mere content of the second *Trairūpya*-condition.

The above considerations enable us to discern the inconclusive character of a number of arguments given by Katsura for the existence of a version of the second mark with *eva* which are based on other textual passages than the one investigated above. It is stated in Katsura 1983:17/542 that Dignāga "formulates in PS II. 21 the relation between liṅga and liṅgin, which is a forerunner of Dharmakīrti's definition of vyāpti (pervasion), by using the *eva*-restriction". However, the passage of PS II 21 together with the corresponding explanations in the PSV express the view that the "sign-bearer" = the indicated thing = the *probandum* must occur whenever the "sign" = the indicator = the *probans* occurs and that the sign occurs only when the sign-bearer occurs. The issue which is at stake in the passage is that this relation cannot be reversed. We can gather from this that the author of the PS advocated the opinion that a proper logical reason occurs, apart from the *pakṣa*, in the *sapakṣa*-domain, but never elsewhere, whereas the occurrence of the property to be inferred is not necessarily restricted in an analogous manner to the occurrence of the logical reason; therefore *probans* and *probandum* cannot be (automatically) reversed. But at this place we do not even find a hint that the author of the passage regarded it as a function of the second *Trairūpya*-condition to guarantee this restriction of occurrence. How much less can we derive that the second mark had the content of precisely this occurrence-requirement. After all, it does not suffice to show that the author of the PS possessed the idea of the restriction of the occurrence of the reason to the *sapakṣa*-domain because his theory of *Trairūpya* as a whole clearly shows that he was not confused and knew (as others before him also knew already) that it cannot be permitted that the reason occurs somewhere where the *probandum* does not occur.

Katsura also points out that Dignāga has stated regarding the positive and negative examples that (only) in this way one can show that the logical reason is present only in the *sapakṣa*-domain and necessarily absent whenever the *probandum*

is absent[19] and that the author of the PS argued concerning the function of examples "that vyāpti can be correctly expressed iff *eva* is applied properly". Katsura thereby refers to remarks in the PSV on PS IV 4, in particular PSV (K) 148b[4] = Kitagawa 1965:514 and PSV (K) 149a[1-3] = Kitagawa 1965:515 (see S. Katsura 1983 17/542). Here the same holds good. The context of the quoted passages does not show that each of the *Trairūpya*-conditions two and three by itself guarantees that the occurrence of the logical reason is restricted to the *sapakṣa*-realm. Even if there were any evidence to the effect that the positive examples, the *sādharmyadṛṣṭāntas*, are connected with the function to establish that the reason occurs exclusively in the realm of similar instances (apart from the *pakṣa*), it would not at all be proven that the *sapakṣa*-condition possesses the import of a version containing *eva*. If it is the function of a positive example to establish that the reason occurs only in the *sapakṣa*-domain this can be due to the fact that such an example immediately reveals the cooccurrence of *probans* and *probandum* in other instances than the *pakṣa*, i.e. the fulfillment of the *sapakṣa*-condition in the reading of $ES_{-eva}2$, which in its turn can serve as the basis for establishing the exclusive occurrence of the reason in the *sapakṣa*-realm by the ascertainment of the fulfillment of the third mark of *Trairūpya*.

It should finally be noted that Katsura's "external" argument for the need to supply *eva* in the third *Trairūpya*-condition, namely the fact that the particle occurs in the formulation of the third mark in Praśastapāda's *Praśastapādabhāṣya*, would yield the opposite result regarding the second *Trairūpya*-condition, if it were applied analogously. It is not only beyond doubt that the second condition of *Trairūpya* does not exhibit *eva* in the *Praśastabādhabhāṣya*, but it can also be regarded as almost certain that the second mark was not intended to be understood in the sense of a formulation with *eva* and a noun-phrase synonymous with *sapakṣe* in its focus. We will revert to the interpretation of Praśastapāda's *Trairūpya*-theory in the next chapter.

V

It seems doubtful that Dignāga's works reveal anywhere a conception of the second *Trairūpya*-condition corresponding to the interpretations $ES_{+eva}1\text{-}4$. It has turned out that the prominent passage of PS II 5cd together with the corresponding portions of the PSV only apparently testify a version with *eva*. A closer analysis shows that it is more probable that the author of the text envisaged a *sapakṣa*-condition which corresponds to $ES_{-eva}2$.

This means, however, that the second mark of *Trairūpya* represents a requirement which is not implied by the notion of an invariable concomitance between *probans* and *probandum* and it follows from this that the *Trairūpya*-canon as a whole goes much further than the postulate that the logical reason must not

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19 This fact is explicitly brought forward in order to support the thesis that *eva* has to be supplied in the third *Trairūpya*-condition. However, it is probable that Katsura regards it also as evidence for the addition of the particle in the second mark.

occur anywhere where the property to be proven is absent. But now we are faced with the problem of giving an account as to why such a more demanding requirement was introduced into the theory. It is by no means sufficient to point out that Dignāga in the same manner as the author of the *Nyāyapraveśa* regarded logical reasons of the *asādhāraṇa*-type, i.e. reasons which are not exhibited by any entity numerically different from the *pakṣa*, as fallacious. This insufficiency mainly results from two facts:
1. Firstly, it is not at all self-evident that it is the job of the *Trairūpya*-theory, and its second condition in particular, to rule out proofs and inferences with reasons of this type. There is evidence to the effect that the *Trairūpya*-canon in the theory/theories of Śaṅkarasvāmin and Dignāga was conceived as furnishing a necessary, but not a both necessary and sufficient criterion of the acceptability of logical reasons and indirectly of proofs and inferences. Therefore in this respect no absolutely compelling need was given to construct the doctrine of *Trairūpya* in such a way that it ruled out logical reasons of the *asādhāraṇa*-type. — By the same token it is not cogent to derive the conclusion that the *Trairūpya*-canon contained the postulate of the exemplification of *probans* and *probandum* in at least one instance different from the *pakṣa* and that the second *Trairūpya*-mark in particular implies this requirement from the mere fact that *asādhāraṇa*-reasons are regarded as unacceptable in Dignāga's and Śaṅkarasvāmin's — or other — theories, as it has been done by some scholars. This consideration can at best furnish good additional support for such a hypothesis if there are other, independent grounds which speak in its favour.
2. Secondly, even if one hypostatizes the assumption that the exclusion of *asādhāraṇa*-reasons should be effectuated by the *Trairūpya*-canon, if by anything at all, the problem persists as to why arguments with such reasons should be discarded as not acceptable. Thus the supposition that the second *Trairūpya*-condition has the import of $ES_{-eva}2$ finally leads to the problem of the rationale behind the acceptance or rejection of particular kinds of arguments. But as long as a justification for the way logical reasons are classified as valid or invalid, sound or unsound is not visible, there remains the threat that our proposed *interpretation* of the *Trairūpya*-canon might turn out to be inadmissible on account of the circumstance that it presupposes a too implausible principle for the acceptability of arguments.

Moreover, the fact that the *Trairūpya*-conditions according to our proposed interpretation do not even partially coincide with the notion of inseparable-connection, as explicated in the first chapter on the basis of Vasubandhu's definitions in the *Vādavidhi*, asks for a clarification regarding the relation of the conditions to other theoretical notions and the theoretical status of the *Trairūpya*-marks in the framework of the entire theory of inference.

It has already become apparent that the canon of *Trairūpya* has been expressed by different formulations in different textual passages. This raises the question as to whether there are wordings which express the doctrine in a more genuine way than others. It also gives reason for the hope that one might encounter formulations which could provide us with a key for solving the above mentioned problem regarding the theoretical function and status of the *Trairūpya*-doctrine as well as the nature of the theory to which this doctrine belongs. It seems that the

chapter on inference in Praśastapāda's *Praśastapādabhāṣya* (or, as it is also called, the *Padārthadharmasaṃgraha*) helps us to come closer to a solution of the aforementioned problems. In that text we encounter formulations of the canon of *Trairūpya* which explicitly exhibit epistemic notions. It is precisely this characteristic which turns out to be of highest significance.

PART III

EPISTEMIC VERSIONS OF *TRAIRŪPYA*

The conditions of *Trairūpya* in the *Praśastapādabhāṣya*

I

At the beginning of the *anumāna*-section of the *Praśastapādabhāṣya* (PB) we find the following passage:

PB 480/562[20] *yad anumeyanārthena deśaviśeṣe kālaviśeṣe vā sahacaritam anumeyadharmānvite cānyatra sarvasminn ekadeśe vā prasiddham anumeyaviparīte ca sarvasmin pramāṇato 'sad eva tad aprasiddhārtasyānumāpakaṃ liṅgaṃ bhavatīti // yat tu yathoktāt trirūpāl liṅgād ekena dharmeṇa dvābhyāṃ vā viparītaṃ tad anumeyasyādhigame liṅgaṃ na bhavatīti /*
"That which occurs together with the object to be inferred (= the object of inference = the *pakṣa*) at a particular place or a particular time and which is known [as occurring] elsewhere in what is endowed with/accompanied by the property (*dharma*) to be inferred, either in all or in [at least] one place, and which according to a means of valid cognition (*pramāṇa*) is only/exclusively non-existent in all that which is opposite to that to be inferred, that is an indicator (*liṅga*) which lets [one] infer a thing not yet known/recognized [as occurring at that particular instance = the *pakṣa*], this is the import [of the first verse]. But that which is opposite to/deviating from the aforementioned threefold indicator by one or by two aspects (*dharma*) that is not an indicator for the recognition of that which is to be inferred, this is the import [of the second verse]."[21]

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[20] The first number refers to the edition of Śrīdurgādhara Jhā, Vāranasi 1963 (with the *Nyāyakandalī* and a Hindi-translation), the second to the edition of G. Kavirāj, Benares 1930 (with the *Vyomavatī*).

[21] The expression 'this is the import of' renders (the two occurrences) of *iti* in the Sanskrit text. This word has obviously the function to make explicit that the remarks should be understood as an explication of the meaning of the two verses which stand at the very beginning of the *anumāna*-section of the PB, which runs as follows (476/562):

liṅgadarśanāt sañjāyamānaṃ laiṅgikam/ liṅgaṃ punaḥ:

> *yad anumeyena sambaddhaṃ prasiddhaṃ ca tadanvite /*
> *tadabhāve ca nāsty eva tal liṅgam anumāpakam //*
>
> *viparītam ato yat syād ekena dvitayena vā /*
> *viruddhāsiddhasandigdham aliṅgaṃ kāśyapo 'bravīt //*

"That [knowledge] which arises from the perception of an indicator is based upon an indicator. As regards the indicator however:

> That which is connected with the object to be inferred (*anumeya*) and which is known in that which is endowed with/accompanied by that and which is only/exclusively

It is immediately obvious that the requirement which corresponds to the *vipakṣa*-condition of the NP is formulated with the use of *eva*. The preceding expression which appears to be the correlate of the second mark in the NP seems to formulate a condition which at least implies the proposition of $ES_{-eva}2$. If the proving property is known to exist elsewhere than in the *pakṣa*, either in all instances or in a part of the realm of entities endowed with/accompanied by the property to be proven, it must also hold good that there is at least one thing different from the *pakṣa* which exhibits both the *probans* and the *probandum*. It should also be noted that the first condition is formulated in a way which seems to deviate from Uddyotakara's demand that the logical reason must be "fully present", i.e. must occur everywhere in the (domain of the) *pakṣa*. However, one does not get the impression that the author of the PB devoted special attention to inferences and proofs with plural subjects, where the problems regarding the correct formulation of the first *Trairūpya*-mark discussed in the NV become relevant. If he had done this, he possibly would have had a different conception regarding the logical form of a thesis than Uddyotakara; i.e. Praśastapāda in contradistinction to the author of the NV would have supposed that the thesis to be established by an inference or proof generally represents a claim to the effect that some property occurs somewhere in the *pakṣa*-domain or is exhibited by at least some instance in the *pakṣa*-realm.

All this is, however, less important than the following fact: The text of the PB exhibits expressions which support the assumption that the marks of a logical reason — at least partly — refer to an epistemic situation. The relevant expressions are *prasiddham* and *pramāṇataḥ*. However, the formulations allow for a number of different interpretations.

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non-existent when(ever) that does not exist, that is an indicator which lets [one] infer.

Whatever is opposed to/deviating from this by one or by two that Kāśyapa has declared as a non-indicator which is contradictory, unestablished [or] doubtful."

There are some reasons to doubt that Praśastapāda's explanation accords with the originally intended import of the two verses, but these questions need not concern us at present because the following investigations are only aimed at a clarification of Praśastapāda's own views on *Trairūpya* on the basis of those textual passages which represent them in a relatively unambiguous manner (which, as we shall shortly see, still leaves room for several interpretations).

II

The phrase: *anumeyadharmānvite cānyatra sarvasminn ekadeśe vā prasiddham*

Various interpretations result from the fact that the epistemic operator represented by the expression *prasiddham* could be assigned different scope. We shall use the formulas '$xK<p>$' as well as '$xKy[Fx]$'[22] in order to represent the semantic content of the words *prasiddha* and *pramāṇataḥ* according to distinct interpretations. They can be translated into 'x knows that p' and 'x knows of y, that it, namely y, is F' respectively. The latter expression is meant to represent a *de-re*-knowledge about a certain object. Accordingly the variable 'y' has to be regarded as occurring in an extensional context.[23] Regarding the second *Trairūpya*-condition, three principal types of readings have to be distinguished which differ from each other regarding the scope of the epistemic predicate. They can be written as follows:

Se1: $(\exists z)(zK<(\exists x)((x \neq p \; \& \; Sx) \; \& \; Hx)>)$

Se2: $(\exists x)(x \neq p \; \& \; (\exists z)(zKx[Sx \; \& \; Hx]))$

Se2*: $(\exists x)(\exists z)(zKx[(x \neq p \; \& \; Sx) \; \& \; Hx])$

Se3: $(\exists x)((x \neq p \; \& \; Sx) \; \& \; (\exists z)(zKx[Hx]))$

Se3*: $(\exists x)(Sx \; \& \; (\exists z)(zKx[x \neq p \; \& \; Hx])$

These formulas could be paraphrased in the following way:

PSe1: "There is some (person) z who knows that there is an object x different from the *pakṣa* and exhibiting the property to be proven which exhibits the proving property."

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[22] The small letters in the square brackets are not variables! They are merely used in order to characterize the predicate in question regarding its logical form, e.g. whether it is a one-place predicate or represents a two-place, three-place etc. relation. In case of one-place predicates 'F' could also be used instead of 'Fx', 'Fy' etc. However, the employment of small letters in contexts, where only one-place predicates occur could be useful in order to make explicit, with which type of subject the predicate combines, whether e.g. it is a predicate applying to concrete particulars, persons, material bodies etc., to spatio-temporal locations or to abstract entities, numbers, propositions etc. We will use henceforward always 'x' as a neutral variable, not carrying any implications regarding the type of objects of its domain.

[23] This means that expressions with the same reference (denotation) can always be substituted without change of truth-value. If we have used the expression '*de-re*-knowledge' we do not intend to claim that the matter is about some peculiar kind of knowledge. We want to imply, however, that a special *way of describing* the knowledge of some being is at stake, namely a manner of characterizing the epistemic state of a person as being a knowledge about some particular object (or range of objects) which possesses as its content the attribution of some property or relation. The decisive point consists in that the way in which the object is referred to in such a characterization must not be identical with the way(s) the knowing subject himself refers to that object, if he expresses his knowledge regarding the object in question. It is not even necessary that the subject is able to have such a way of referring at his disposal.

PSe2: "There is some object x which is different from the *pakṣa* and such that there is some (person) z who knows of x that it exhibits both the property to be proven and the proving property."

Pse2*: "There is some object x such that there is some (person) z who knows of x that it is different from the *pakṣa* and exhibits the property to be proven and the proving property."

PSe3: "There is some object x different from the *pakṣa* and exhibiting the property to be proven such that there is some (person) z who knows of x that it exhibits the proving property."[24]

Pse3*: "There is some object x exhibiting the property to be proven such that there is some (person) z who knows of x that it is different from the *pakṣa* and exhibits the proving property."

It is not difficult to see that the decisive difference between Se1, Se2 and Se3 relates to the content of the knowledge required in order that the second *Trairūpya*-condition can be fulfilled. Se1 demands that the knowledge of some being/person

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[24] The expressions: 'exhibit the property to be proven' and 'exhibit the proving property' can in its turn be understood in three different ways in knowledge-contexts. For the expressions 'x knows that y exhibits the property to be proven/the proving property' and 'x knows of y that it exhibits the property to be proven/the proving property' linguistically allow at least the following readings: a1) 'x knows that y exhibits the property to be proven/the proving property, whatever this property might actually be', a2) 'x knows of y that it exhibits the property to be proven/the proving property, whatever this property might actually be', b1) 'x knows that y exhibits the property which actually is the property to be proven/the proving property', b2) 'x knows of y that it exhibits the property which actually is the property to be proven/the proving property', c1) x knows that y exhibits the property which actually is the property to be proven/the proving property and knows of that property that it is the property to be proven/the proving property', c2) 'x knows of y that it exhibits the property which actually is the property to be proven/the proving property and knows of that property that it is the property to be proven/the proving property'. In our context the alternatives of the group a) can be safely ruled out. There should be hardly any need to demonstrate in detail that Praśastapāda probably did not intend to allow that in cases of valid inferences and proofs one might not know what the properties that play the role of the *probans* and the *probandum* actually are. It is however not easy to decide whether readings of the category b) or of category c) should be adopted. Most likely, the author of the PB took it implicitly for granted that in cases of correct inference and proof all the persons concerned know which roles are played by which properties. Therefore readings in the sense of c) might not be out of place. On the other hand, one might wonder whether it could not be justified to mitigate the requirement of the second *Trairūpya*-condition by dropping the demand of the knowledge of the played role. This would be sensible if the epistemic situation referred to would not concern so much the state-of-affairs at the time of the actual carrying out of an inference or proof but the state-of-affairs which guarantees that potentially effectuated inferences and proofs would be valid, if they were carried out. In case the word *anumāpaka* is attributed such a "potential" import and if Praśastapāda's requirements are taken as relating to the properties which permit the assumption of the role of an admissible logical reason the mitigated version would be more appropriate, whereas the stronger variant would suit the supposition that the author of the PB had the prerequisites of the acceptability of an actually executed inference or proof in mind. Although the distinction seems of considerable theoretical importance we will disregard it in the following discussion allowing the possibility of correspondingly different readings of the given explications of the *Trairūpya*-conditions.

has the content that some entity different from the *pakṣa* and exhibiting the property to be proven also exhibits the proving property. Se2 requires that the relevant knowledge is about an entity different from the *pakṣa* and that it consists in attributing to that entity (the property of exemplifying) both the property to be proven and the proving property. Se3 postulates that the knowledge of some being/person concerns an entity which is actually different from the *pakṣa* and exhibits the property to be proven and has the content of attributing to that entity (the property of exhibiting) the proving property. It is quite obvious that these alternatives are by no means equivalent.

There is room for further subcategorizations. The formulation of the text does not unambiguously determine whether the expression *prasiddham* relates to the knowledge of one particular person, a general knowledge or to a common knowledge of some relevant group of persons. Accordingly the above given explications can be regarded as expressing logical implications of more specific propositions which represent interpretations of the following formulas:

Ses1 $sK\langle(\exists x)((x \neq p \,\&\, Sx) \,\&\, Hx)\rangle$

Ses2 $(\exists x)(x \neq p \,\&\, sKx[Sx \,\&\, Hx])$

Ses2* $(\exists x)(sKx[(x \neq p \,\&\, Sx) \,\&\, Hx])$

Ses3 $(\exists x)((x \neq p \,\&\, Sx) \,\&\, sKx[Hx])$

Ses3* $(\exists x)(Sx \,\&\, sKx[x \neq p \,\&\, Hx])$

Irrespective of whether 's' is interpreted in the sense of 'the inferring person' or 'the majority of all (adult, educated....) persons' or 'the group of all persons concerned', Se1-3 represent logical implications of the corresponding interpreted formulas. It is probable that the knowledge with respect to the inferring subject is in any case involved. The interpretation relating to the group of all persons concerned might be the appropriate interpretation of the second *Trairūpya*-condition in the context of proof, or as it is also called, "inference for others". Though the *Trairūpya*-canon with respect to inference for others is stated separately at a later passage of the *anumāna*-section of the PB, the second condition has been formulated in a similar way with the use of the expression *prasiddha*.[25]

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[25] The editions of the PB read on p. 575/603 *tatsamānajātīye sarvatra sāmānyena prasiddhaṃ* which can hardly be correct. Perhaps *sarvatra* has to be emended to *'nyatra* so that the meaning of the phrase is: "[That which is....] known [as occurring] in its universal form elsewhere in what is of the same kind/genus as that". Otherwise it is also possible that the expression *sarvatra* or even *sarvatra sāmānyena* should be deleted, an assumption which could be supported by the wordings of the *Vyomavatī* and the *Nyāyakandalī*. However this may be, the import is probably the same as that of the first formulation of the *sapakṣa*-condition, namely that the logical reason must be known to occur in some instance different from the *pakṣa* that exhibits the property to be proven, i.e. the corresponding universal (*sāmānya*).

III

The phrase: *anumeyaviparīte ca sarvasmin pramāṇato 'sad eva*

1

The formulation of the third *Trairūpya*-condition raises even more interpretational problems. This is so because we do not only face the question which scope should be attributed to the epistemic expression *pramāṇataḥ*, but also have to deal with two additional problems. First it is not immediately clear whether the realm to which the condition applies includes the *pakṣa* or not and secondly it cannot be taken as absolutely sure that the expression *pramāṇataḥ* indicates an epistemic version of the third *Trairūpya*-mark.

The reason why the formulation does not strictly necessitate an epistemic interpretation lies in the fact that the expression *pramāṇataḥ* can, but must not be taken as relating to an actual epistemic state. It could refer to a potential epistemic state in the sense that it expresses that the state-of-affairs which is described by the sentence within which the expression occurs would turn out to obtain, if the matter were investigated by means of valid cognition. In other words, an expression of the form '*pramāṇataḥ p*' can have two different senses: It might express a) that it is or has been actually verified that p is the case or b) that p is true according to what a cognition based on means of valid cognition (*pramāṇa*) establishes as true, if the truth of the proposition in question ('p') is assessed on the basis of means of valid cognition. Taken in this latter "potential" and atemporal sense the import of *pramāṇataḥ p* would (under the supposition that all truths can be in principle established by means of valid cognition) be equivalent to nothing else but 'It is really the case that p' or 'It is true that p'.

Applied to the interpretation of the phrase *anumeyaviparīte ca sarvasmin pramāṇato 'sad eva* the "potential" reading of *pramāṇataḥ* would yield the import that the logical reason is actually absent in all instances which are opposite to the *anumeya*. On this basis the third mark of the *Trairūpya*-theory of the PB can be regarded as identical with the *vipakṣa*-condition of the NP. Accordingly, EV1-4 would represent the range of choice for the correct explication.

One could adduce in favour of this interpretation that a later formulation of the *Trairūpya*-canon given in the PB in the context of proof or inference for others does not exhibit *pramāṇataḥ* or any equivalent: On p.575/603 one finds the formulation *tadviparīte ca sarvasminn asad eva*. Nevertheless, this circumstance is far from proving that the third *Trairūpya*-condition in Praśastapāda's theory has a non-epistemic character. First of all, it is indeed possible that the author of the PB did not regard it as necessary to be fully explicit in the second formulation of the *Trairūpya*-canon. If any of the two occurrences of the formulation of *Trairūpya* should be interpreted in the light of the other, one must rather take the first occurrence as more basic than the second one because it is probable that the author of the PB aims at precision and explicitness most at the place where the *Trairūpya*-canon is introduced for the first time. Secondly, the advantage that the "potential" reading of *pramāṇataḥ* and the non-epistemic interpretation of the third condition

allows for the possibility of a uniform account for both formulations and accords most directly with the literal sense of the later occurrence of the formulation of the third *Trairūpya*-condition is counterbalanced by the fact that a non-epistemic interpretation of the third mark would cause a discrepancy between the second and the third mark: Both at the beginning of the *anumāna*-section and in the later passage dealing with inference for others the second *Trairūpya*-condition has been formulated with the use of *prasiddham*, which makes it difficult to understand the second mark non-epistemically. Therefore the adoption of an epistemic interpretation of the third *Trairūpya*-condition would possess the advantage that it does not only attribute full weight to the expression *pramāṇataḥ* and makes its occurrence plausible but also relieves us from the necessity to explain away a discrepancy between the second and the third *Trairūpya*-mark which seems quite implausible from the point of view of the subject-matter.

2

Assuming that the expression *pramāṇataḥ* characterizes the situation in which inference takes place various alternatives arise not only on account of different possibilities of scope but also due to the fact that the distinctions which are embodied in EV1-4 remain in force in the present case. Accordingly, the range of linguistically possible explications has to be subdivided into interpretations assuming either the inclusion or the non-inclusion of the *pakṣa* into the domain and interpretations which entail or do not entail claims regarding the existence of *vipakṣa*-instances not exhibiting the *probans* as well as claims regarding the knowledge of the existence of such instances.

Regarding the scope of the epistemic expression (at least) six different possibilities must be distinguished. Assuming a non-restrictive *vipakṣa*-domain and discarding any existential import regarding the existence of dissimilar instances, the six possibilities can be characterized by the following formulas:

Ven1: $(\exists z)(zK\langle(x)(-Sx \rightarrow -Hx)\rangle)$

Ven2: $(\exists z)(x)(zKx[-Sx \rightarrow -Hx])$

Ven3: $(\exists z)(x)(-Sx \rightarrow zKx[-Hx]$

Ven4: $(\exists z)(x)(-Sx \rightarrow -zKx[Hx])$

Ven5: $(\exists z)(x)(zKx[-Sx] \rightarrow zKx[-Hx])$

Ven6: $(\exists z)(x)(zKx[-Sx] \rightarrow -zKx[Hx])$

(The small letter 'n' is meant to indicate that the conditions in question are non-restrictive). If one supposes that the range characterized by the word *anumeyaviparīte* excludes the *pakṣa*, one obtains six (pairs/triples of) variants of Ven1-Ven6:

Ver1: $(\exists z)(zK\langle(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx)\rangle)$

Ver2: $(\exists z)(x)((x \neq p) \rightarrow zKx[-Sx \rightarrow -Hx])$

Ver2*: $(\exists z)(x)(zKx[(x \neq p \ \& \ -Sx) \rightarrow -Hx])$

Ver3: $(\exists z)(x)((x \neq p \ \& \ \text{-}Sx) \rightarrow zKx[\text{-}Hx])$

Ver3*: $(\exists z)(x)(\text{-}Sx \rightarrow zKx[x \neq p \rightarrow \text{-}Hx])$

Ver4: $(\exists z)(x)((x \neq p \ \& \ \text{-}Sx) \rightarrow \text{-}zKx[Hx])$

Ver4*: $(\exists z)(x)(\text{-}Sx \rightarrow \text{-}zKx[x \neq p \ \& \ Hx])$

Ver5: $(\exists z)(x)((x \neq p \ \& \ zKx[\text{-}Sx]) \rightarrow zKx[\text{-}Hx])$

Ver5*: $(\exists z)(x)(zKx[x \neq p \ \& \ \text{-}Sx] \rightarrow zKx[\text{-}Hx])$

Ver5:** $(\exists z)(x)(zKx[\text{-}Sx] \rightarrow zKx[x \neq p \rightarrow \text{-}Hx])$

Ver6: $(\exists z)(x)((x \neq p \ \& \ zKx[\text{-}Sx]) \rightarrow \text{-}zKx[Hx])$

Ver6*: $(\exists z)(x)(zKx[x \neq p \ \& \ \text{-}Sx] \rightarrow \text{-}zKx[Hx])$

Ver6:** $(\exists z)(x)(zKx[\text{-}Sx] \rightarrow \text{-}zKx[x \neq p \ \& \ Hx])$

(The letter 'r' indicates the restrictive character of the conditions). The formulas Ver1-Ver6* can be paraphrased as follows:

PVer1: "Somebody knows that all entities different from the *pakṣa* which do not exhibit the *probandum* do not exhibit the *probans*."

PVer2: "Somebody knows of all entities different from the *pakṣa* that if they do not exhibit the *probandum* they also do not exhibit the *probans*."

PVer2*: "Somebody knows of all entities that if they are different from the *pakṣa* and do not exhibit the *probandum* they also do not exhibit the *probans*."

PVer3: "Somebody knows of all entities different from the *pakṣa* and not exhibiting the *probandum* that they do not exhibit the *probans*."

PVer3*: "Somebody knows of all entities not exhibiting the *probandum* that if they are different from the *pakṣa* they do not exhibit the *probans*."

PVer4: "Somebody does not know with respect to any entity different from the *pakṣa* which does not exhibit the *probandum* that it exhibits the *probans*."

PVer4*: "Somebody does not know with respect to any entity not exhibiting the *probandum* that it is both different from the *pakṣa* and exhibits the *probans*."

PVer5: "Somebody knows of all the entities which are both different from the *pakṣa* and known by him as not exhibiting the *probandum* that they do not exhibit the *probans*."

PVer5*: "Somebody knows of all the entities which are known by him as being different from the *pakṣa* and not exhibiting the *probandum* that they do not exhibit the *probans*."

PVer5:** "Somebody knows of all the entities which are known by him as not exhibiting the *probandum* that they do not exhibit the *probans* if they are not identical with the *pakṣa*."

PVer6: "Somebody does not know of any entity different from the *pakṣa* and known by him as not exhibiting the *probandum* that it exhibits the *probans*."

PVer6*: "Somebody does not know of any entity known by him as being different from the *pakṣa* and not exhibiting the *probandum* that it exhibits the *probans*."

PVer6:** "Somebody does not know of any entity known by him as not exhibiting the *probandum* that it is both different from the *pakṣa* and exhibits the *probans*."

The paraphrases for Ven1-6 can be easily derived from this. In the same manner as Se1-3, these formulations are meant to represent logical implications of propositions which describe the epistemic state of either the inferring subject or a group of persons concerned (e.g. the arguer and his audience) or even a generally prevailing epistemic situation (e.g. a knowledge which should be common to all adult, educated etc. subjects). According to the different possible ways of interpreting 's' in formulas like:

Sens1: $sK<(x)(-Sx \rightarrow -Hx)>$

Sers1: $sK<(x)((x \neq p \;\&\; -Sx) \rightarrow -Hx)>$

etc. one obtains further subcategorizations which are not our primary concern in the present context.

3

It is however important to see that the six main categories embody relevant differences. The first category, represented by Ven1 and Ver1, expresses that somebody possesses the *de-dicto*-knowledge that (apart from the *pakṣa*) all instances not exhibiting the property to be proven do not exhibit the proving property. The characteristic of category 2 consists in that it is known of all things (apart from the *pakṣa*) that they exhibit a conditional property, namely of not exhibiting the *probans* in case the *probandum* is not exemplified — or of not exhibiting the *probans* in case of non-identity with the *pakṣa* plus non-exemplification of the *probandum*. The point of category 3 is that one knows of all things not exhibiting the probandum (in so far as they are different from the *pakṣa*) that they do not exhibit the *probandum* — or: that they do not exhibit the *probandum*, if they are not identical with the *pakṣa*. Category 4 represents a weaker variant of category 3. In contradistinction to the preceding category it demands instead of positive knowledge to the effect that the *probans* is not exemplified only the non-existence of any knowledge of the exemplification of the *probans* (and of the non-identity with the *pakṣa*) regarding all entities which, as a matter of fact, do not exhibit the *probandum* (and are different from the *pakṣa*). The relation between the categories 5 and 6 corresponds to the relation between the categories 3 and 4. The difference with respect to the preceding two categories consists in that the knowledge of the non-exemplification of the *probans* (in case of non-identity with the *pakṣa*) or the lack of a contradictory knowledge concerns those entities which are known as not-exhibiting the *probandum* (plus being different from the *pakṣa*) instead of those which, as a matter of fact, do not exemplify the *probandum* (and are different from the *pakṣa*).

4

It seems quite improbable that Praśastapāda was aware of all these different interpretations which his formulation allows. Therefore it might be futile to speculate about the question as to which alternative corresponds to what the author of the PB had in mind at the time he wrote the above quoted passage. Nevertheless, this fact does not rule out that a decision can be achieved with respect to the issue as to which version would *objectively* best fit other aims which one can safely attribute to the author of the text. As the theoretical status of the *Trairūpya*-doctrine in Praśastapāda's theory of inference has not yet been established it would be circular if this question were decided on the basis of assumptions concerning the function which the *Trairūpya*-doctrine was intended to fulfill. In spite of this, some of the mentioned alternatives can be classified as probable, improbable or less probable on grounds which do not require a definitive and final decision regarding the issue of the theoretical status of *Trairūpya*.

As regards the non-restrictive versions Ven1-6, three of them seem to demand too much and two of them too little. Especially the postulates embodied in Ven1 and Ven2 can be hardly complied with. Or, if they can be fulfilled, it would entail remarkable consequences for the epistemological theory. Regarding Ven1 the difficulty arises as to how it can be realistically expected that a subject in the situation where he performs an inference knows that all entities not exhibiting the *probandum* do not exhibit the *probans*. For this amounts to the same as knowing that whatever exhibits the *probans* also exhibits the *probandum*. Now, it is a characteristic (though not necessary) feature of inferential situations, not seldom explicitly stated by the Indian theoreticians, that the state-of-affairs described by the thesis cannot be verified by perception. Accordingly, at least in those cases where inference is used in order to obtain knowledge of something that cannot be verified by perception alone, knowledge of the universal proposition that all entities exhibiting the *probans* exhibit the *probandum* can hardly rely on the fact that everything including the *pakṣa* which exemplifies the proving property has been also perceived as exemplifying the property to be proven (except in the special cases where the inference refers to a *pakṣa* which has been previously seen as possessing the *probandum*). The adoption of Ven1 raises the problem of the possibility of knowledge of unrestricted universal propositions. This problem is crucial on account of the fact that the relevant knowledge must be one that is based on means of valid cognition (*pramāṇa*). For if the expression *pramāṇataḥ* which occurs in the text has, as presently assumed, the "actual" and not the "potential" import, the epistemic requirement embodied in Praśastapāda's third *Trairūpya*-condition must consist in an actually acquired knowledge based on *pramāṇas*. In the context of Praśastapāda's theory, however, which acknowledges only perception and inference as *pramāṇas*, the fact that the knowledge of the universal proposition cannot be based on perception alone would entail that it must (at least partially) be based on inference. But at this point a vicious infinite regress looms. Since *all* inference must be based on knowledge of the universal proposition that everything exhibiting the *probans* also exhibits the *probandum* or a logically equivalent proposition, how can knowledge of this universal proposition be obtained through inference? In cases

where it is not known by perception that the *pakṣa* exhibits both the *probans* and the *probandum*, *any* inference aimed at establishing the universal concomitance would have to rely on another inference facing the same problem. There are three ways of solving the problem which, however, entail significant theoretical consequences: 1. It is admitted that mere perception can establish knowledge of universal propositions even if their truth has not been verified by perception of all the objects to which they pertain (all the objects constituting the domain of the universal quantifiers). 2. It is assumed that knowledge of universal propositions is/can be established by other means of knowledge than perception. This would demand either a) that it is not *generally* required of inferences that they are based on *pramāṇa*-knowledge of unrestricted universal propositions or b) that further types of *pramāṇa* are admitted in the theory which are responsible for the acquisition of knowledge of universal propositions. 3. The epistemic requirement regarding the third *Trairūpya*-condition is modified. If for example the letter 'K' in the formula '$sK<(x)(-Sx \rightarrow -Hx)>$' were interpreted as "true belief" the problem would disappear. It would be merely required that somebody believes that everything not-exhibiting the *probandum* does not exhibit the *probans* and that this belief is, as a matter of fact, true. Since any postulate concerning the justification of the belief is given up, the demand could be fulfilled in inferential situations. Nevertheless, all these solutions would either require fundamental modifications of the epistemology advocated in the PB or at least introduce elaborations that would change the character of Praśastapāda's philosophy to a considerable extent.

These consequences are so significant because they also impose themselves on the assumption of other explications of the third *Trairūpya*-condition. Similar problems arise, if Ven2 is adopted. In this case the crucial question relates to the possibility of knowing of all entities whatsoever that they exhibit the property of not exhibiting the *probans* in case of non-exemplification of the *probandum*. The *de-re*-requirement embodied in Ven2 is only slightly weaker than the *de-dicto*-postulate of Ven1. It is true that somebody who knows *of* all entities that they exhibit a certain property must not necessarily also know *that* all entities exhibit the property in question. Somebody might have knowledge regarding all objects without knowing that his knowledge actually pertains to all objects. But whereas this difference can be relevant in cases of relatively restricted domains — somebody who sees twenty broken cups taken from the same cupboard without knowing that these are all the cups belonging to the cupboard in question probably knows of all the cups taken from the cupboard that they are broken without knowing that all the cups which belong to the cupboard are broken —, it is difficult to see how it should happen that the requirement of knowledge that all entities are such and such is not fulfilled, but the requirement of knowing of all entities that they are such and such is, if the domain in question is entirely unrestricted.

Ven3 is considerably weaker than Ven1 and Ven2. Nevertheless, the demand that somebody knows of all things not exhibiting the *probandum* that they do not exhibit the *probans* is equivalent to the demand that all entities of which the person in question does not know that they do not exhibit the *probans* must exhibit the *probandum*. Therefore Ven3 would have the consequence that the fulfillment of the *Trairūpya*-conditions guarantees the truth of the thesis to be proven. As the first

condition embodies the requirement that the *pakṣa* actually exhibits the logical reason = *probans*, it entails that nobody can possess a knowledge to the effect that the *pakṣa* does not exhibit the *probans* (and there cannot be any doubt that the knowledge represented by *pramāṇataḥ* is veridical). But if non-existence of knowledge that something does not exhibit the logical reason entails occurrence of the *probandum*, the supposition that the thing in question exhibits the logical reason implies that it must exhibit the *probandum*. Accordingly condition one together with condition three of *Trairūpya* guarantee the truth of the thesis to be inferred or to be proven. This circumstance would create a fundamental difference between the nature of the *Trairūpya*-doctrine of the NP, according to our interpretation, and Praśastapāda's theory. Of course this objective difference alone cannot constitute a decisive argument against the supposition that Ven3 represents the correct explication of Praśastapāda's third *Trairūpya*-condition. But the circumstance that Ven3 embodies the demand that all instances, where the *probandum* is, as a matter of fact, not exemplified must be known as not exhibiting the logical reason, should suffice to arouse suspicion. Again the problem of the possibility of such a knowledge emerges which is aggravated by the restrictions imposed on knowledge by Praśastapāda's *pramāṇa*-theory.

Ven4 and Ven6 appear, on the other hand, excessively weak. They demand only the non-existence of any knowledge of the occurrence of the logical reason with respect to all instances not exhibiting the *probandum* or known as not exemplifying the *probandum* respectively. Thus the queer consequence results that the chances of meeting the third *Trairūpya*-requirement increase corresponding to decrease in knowledge. If nothing were known regarding any dissimilar instance, the condition would be automatically fulfilled. Despite this, Ven4 would be strong in one respect. In the same manner as Ven1-3 it makes the canon of *Trairūpya* truth-guaranteeing with respect to the thesis, although not on the assumption alone that the *pakṣa* actually exhibits the *probans*, but on the assumption that the *pakṣa* is known as exhibiting the logical reason. The formula '(x)(-Sx → -sKx[Hx]' is equivalent to '(x)(sKx[Hx] → Sx)', and accordingly it follows that the *pakṣa* exhibits the *probandum* if it is known to exhibit the *probans*. Even if one does not assume that the first condition has been formulated in a not fully explicit manner and represents the epistemic requirement of knowing that the logical reason occurs in the *pakṣa*, but assumes instead that the formulation in the prose text has to be taken literally in the sense that the *pakṣa* actually exemplifies the proving property, knowledge of the occurrence of the reason in the *pakṣa* is undoubtedly regarded by Praśastapāda as a characteristic feature of valid inferences. Therefore Ven4 would entail the truth of the thesis on the supposition that the characteristic features of acceptable inference-situations obtain. The explanations in the sense of Ven4 and Ven6 appear less probable also in view of the wording of the text. The formulation *anumeyaviparīte ca sarvasmin pramāṇato 'sad eva* suggests rather knowledge of non-occurrence than non-occurrence of knowledge. In the latter case a formulation like *anumeyaviparīte cāprasiddham* = "[which is] not established/not known in that which is opposite to the *anumeya*" would have been entirely appropriate.

Therefore Ven5 appears as the most promising candidate among the epistemic and non-restrictive explications. Saying that the proving property must be

known not to occur whenever the property to be proven is known as not occurring, Ven5 shares the weakness of Ven4 and Ven6 that lack of knowledge tends to increase the chances of being entitled for the undertaking of an inference. Nevertheless, the demand that it must not occur that one knows of some thing that it lacks the *probandum*, but does not know that it lacks the *probans*, seems not unreasonable. It entails that it is imperative to ensure knowledge of the non-exemplification of the *probans* as soon as knowledge of non-exemplification of the *probandum* is obtained. As long as the *Trairūpya*-conditions are taken as merely necessary conditions for the appropriateness of inferences and proofs this requirement might be acceptable as a methodological means of providing for epistemic situations in which the inference is not unwarranted. A precarious state-of-affairs arises only, if the *Trairūpya*-canon is given the status of jointly both necessary and sufficient conditions for the acceptability of logical reasons — which must not be confused, however, with the issue of whether or not the fulfillment of the *Trairūpya*-conditions guarantees the truth of the thesis to be proven (= whether or not the conjunction of the *Trairūpya*-propositions logically entails the proposition which has to be established as true). As a necessary and sufficient requirement for acceptability the demand that the logical reason occurs in the *pakṣa*, or is known to occur in the *pakṣa*, that it is established in some other similar instances and that it is not known not to occur whenever the *probandum* is known not to occur appears too weak. For it seems implausible to attribute acceptability to a reason in a situation in which one knows only its occurrence in the *pakṣa* and its coocurrence with the *probandum* in some instance and has never bothered about its occurrence or non-occurrence in any other cases. The last phrase of the above cited passage (*yat tu yathoktāt trirūpāl liṅgād ekena dharmeṇa dvābhyāṃ vā viparītaṃ tad anumeyasyādhigame liṅgaṃ na bhavatīti*) betrays with sufficient clarity that the author of the PB regarded his *Trairūpya*-conditions as necessary requirements for a proper logical indicator. But the question is, whether the expression *anumāpakaṃ* = "which lets/makes infer" occurring in the preceding sentence should be taken as indicating that Praśastapāda wanted that his three marks function also as sufficient conditions. There are in fact a number of phenomena which suggest that the author of the PB regarded the *Trairūpya*-canon as something that furnishes both necessary and sufficient conditions for proper indicators and reasons and we will have to revert to this issue later. At present it suffices to point out that the fact that Ven5 appears excessively weak in the context of both necessary and sufficient requirements does not rule out the possibility that Ven5 might be appropriate as a constituent of more complex formulations — in particular in formulations where Ven5 is combined with existential requirements regarding instances where both the *probans* and the *probandum* are known not to occur.

5

The relative probabilities of the restrictive interpretations Ver1-6** and their consequences largely correspond to those of the non-restrictive explications.

Despite the restriction to the realm of entities different from the *pakṣa* Ver1, Ver2 and Ver3 raise the problem regarding the possibility of the required

knowledge in a similar way. The difficulty is especially acute with respect to Ver1 and Ver2. Even if the *pakṣa* is left out of the account the knowledge in question concerns an unsurveyable domain. This does of course not mean that such knowledge is impossible. But in the same manner as in the case of Ven1 and Ven2 one must allow for the possibility of acquiring universal knowledge on some other basis than mere observation of the totality of entities. Therefore it is not difficult to see how both Ven1-2 and Ver1-2 foreshadow Dharmakīrti's later doctrine of *svabhāva-pratibandha*. For the postulate of some internal connection between *probans* and *probandum* the knowledge of which justifies us in assuming the universal proposition that (apart from the *pakṣa*) all instances exhibiting the proving property exhibit the property to be proven, is surely not the only possible, but a natural move to overcome the difficulty. This creates, however, the problem as to how knowledge of the internal connection is possible. Since it is implausible to derive such knowledge from mere perception whereas the hypostatization of inference as basis causes the danger of infinite regress, this way of explaining the possibility of universal knowledge threatens to break the framework of the two-*pramaṇa* theory. Since the possibility is open either to postulate additional means of valid knowledge or to admit types of knowledge which must not be based on *pramāṇas*, skepticism is by no means the only way leading out of the dilemma. It seems however that this problem has not been satisfactorily answered in the Indian philosophical tradition.

However this may be, the problem of the possibility of the required knowledge is slightly less acute in the case of Ver3. One could advocate the position that the requirement of Ver3 is satisfiable in cases where the number of dissimilar instances is limited. Supposed that the property to be proven is exhibited by all but two entities in the universe (think of a predicate like: 'x is neither identical with *a* nor with *b*') and that one has observed that the two entities in question do not exhibit the *probandum*, then one might say that somebody knows with respect to all entities (different from the *pakṣa*) which actually do not exhibit the *probandum* that they do not exhibit the *probans*. Of course the existence of this possibility holds good both for the restrictive and the non-restrictive version of Ve(n/r)3. It is however only Ver3 which does not entail that the *pakṣa* must exhibit the *probandum* because of the fact that — as it follows from the first *Trairūpya*-requirement — the *pakṣa* is not known as not exhibiting the *probans*. Notwithstanding, difficulties exist with respect to all the cases, which seem to constitute the majority, where it is not realistic to assume that the inferring subject can observe all dissimilar instances even if the *pakṣa* is left out of the account.

Since Ver4 and Ver6 appear less probable for similar reasons as Ven4 and Ven6, Ver5 seems to be the best candidate among the unasterisked restrictive versions. As Ver5* and Ver5** pose less problems than Ver3*, Ver4*, Ver6* and Ver6** as long as the *Trairūpya*-canon is supposed to yield only necessary acceptability-conditions, the best solution would be to adopt Ver5, Ver5* or Ver5** in this case. — It should be noted that Ven5 eventually amounts to the same requirement as Ver5 since the predicate represented by 'zKx[-Sx]' can only apply to entities different from the *pakṣa* if the knowledge of the inferring subject is at stake and if it is presumed that the inferring subject does not yet know whether or not the *pakṣa* exhibits the *probandum*.

6

The assumption that the author of the PB meant his *Trairūpya*-doctrine as a canon of merely necessary conditions is however questionable. We had already mentioned that the use of the expression *anumāpakaṃ* in connection with the reasons which meet the *Trairūpya*-requirements could be understood as a sign that the canon of *Trairūpya* warrants the validity of indicators. Now, Praśastapāda draws a distinction between indicators and non-indicators as well as between reasons (*apadeśa*) and non-reasons (*anapadeśa*), a dichotomy which seems to be intended as being exhaustive. But if one looks closer at Praśastapāda's theory of non-reasons it turns out that his classification would exactly correspond to violations of different *Trairūpya*-conditions or sets of *Trairūpya*-conditions, *if* the first mark of *Trairūpya* were taken epistemically as demanding that the logical reason must be known/ established as occurring in the *pakṣa*. The whole structure of the *anumāna*-section of the PB would fit the supposition that all three *Trairūpya*-conditions are epistemical and that the entire canon of the three conditions is meant as representing a both necessary and sufficient condition for classifying indicators and logical reasons as proper indicators or reasons. On this basis it would be also possible to explain, why nothing in Praśastapāda's theory corresponds to the fallacious reasons of the types *dharmaviśeṣaviparītasādhana*, *dharmisvarūpaviparīta-sādhana* and *dharmiviśeṣaviparītasādhana* of the *Nyāyapraveśa*. One can also understand, why the author of the PB took so much trouble to prove the non-existence of fallacious reasons of the kind *viruddhāvyabhicārin* as a separate category and to classify the relevant examples as *asādhāraṇa*-reasons thereby subsuming them under his category of *anadhyavasita* "non-reasons", a strategy which forced him to analyse the pertinent examples in an essentially different manner. The stratagem consisted in hypostatizing one complex property of the form 'H_1 & H_2' instead of two properties, each establishing *probanda* that contradict each other. This distortion would hardly appear motivated, if it was not for maintaining the claim that the four types of non-reasons exhaust all possibilities. But the need to preserve this tenet obtains much more plausibility on the assumption that it was rooted in a conception of the *Trairūpya*-doctrine as a canon of together both necessary and sufficient conditions.

It has been pointed out that the explications Ven5 and Ver5,5*,5** seem less appropriate within a conception of *Trairūpya* as a both necessary and sufficient set of requirements for the admissibility or validity of indicators and reasons. This inadequacy can be mitigated, however, if the propositions expressed in Ven5 or Ver5,5*,5** are conjoined with propositions stating that there are instances not exhibiting the *probandum* or known as not exhibiting the *probandum* which do not exhibit the *probans* or are known as such. Now, whereas the non-epistemic existential requirements can be connected with the necessity of the *existence* of dissimilar *instances* not exhibiting the *probans*, epistemic requirements of the form that some dissimilar instance must be known as such and as not exemplifying the *probans* would allow us to establish a direct connection between the third condition of *Trairūpya* and the postulate of the *citation* of dissimilar *examples*. In this way the third mark of *Trairūpya* would also rule out the situation in which somebody knows

that the *pakṣa* exhibits the *probans* and knows that the *pakṣa* occurs somewhere together with the *probandum* but does not take any pains to inquire whether or not the *probans* is exemplified in other instances where the *probandum* is not exhibited.

7

We can make the following proposal for an explication of the three *Trairūpya*-conditions of the PB:

P1: $sK\langle Hp \rangle$ ("s knows that the *pakṣa* exhibits the probans")

P2: $(\exists x)(x \neq p \ \& \ sKx[Sx \ \& \ Hx])$ ("There is an instance different from the *pakṣa* of which s knows that it exhibits both the *probandum* and the *probans*") = Ses2[26]

P3: $(x)((x \neq p \ \& \ sKx[-Sx]) \rightarrow sKx[-Hx]) \ \& \ (\exists x)((x \neq p \ \& \ sKx[-Sx]) \ \& \ sKx[-Hx])$ ("Any instance different from the *pakṣa* of which s knows that it does not exhibit the *probandum* is such that s knows of it that it does not exhibit the *probans*, and there is an instance different from the *pakṣa* of which s knows that it does not exhibit the *probandum* and does not exhibit the *probans*")

It is needless to repeat that P1-P3 represent merely schemes which yield exact conditions if the letter 's' is interpreted. It should also not be necessary to stress again that the proposal is not meant to rule out alternative possibilities. Of special interest are alternative versions with Ven1/2 or Ver1/2 instead of P3.

However, more important than the question as to which one of the alternative epistemic variants of the conditions two and three should be preferred in the context of the PB is the fact that Praśastapāda's text gives significant evidence for epistemic *Trairūpya*-versions at all. For it can be shown that epistemic conceptions of *Trairūpya*, whatever their exact form is, allow us to forge links between the *Trairūpya*-doctrine and other logical ideas, in particular with the notion of the *avinābhāva*-relation explicated at the beginning of our study.

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26 Or perhaps one should prefer the slightly stronger requirement:

P2*: $(\exists x)(sKx[(x \neq p \ \& \ Sx) \ \& \ Hx])$ ("There is an instance of which x knows that it is different from the *pakṣa* and exhibits the *probandum* and exhibits the *probans*") = Se2*

PART IV

CONCOMITANCE, EPISTEMIC AND NON-EPISTEMIC *TRAIRŪPYA*-VERSIONS

I

The principal theoretical notions

Before assessing the systematical relationship between the principal types of concepts and the theoretical character of the *Trairūpya*-doctrine, it is appropriate to give an inventory of the most important notions. In order to simplify the discussion we will, however, confine ourselves to quote only a selected number among the variants which have occurred so far. The following list comprises varieties of *avinābhāva* as well as of epistemic and non-epistemic *Trairūpya*-conditions which are of special importance either because of the high degree of probability of the corresponding interpretations or on account of their specific theoretical significance. The results of the following inquiries will equally hold good of some of the non-listed variants, for which reason they need not be mentioned at this place.

A) Notions of *avinābhāva*

I1: Non-existential notion:
$(x)(Hx \rightarrow Sx)$ = "Any x which exhibits H exhibits S"

I2: Existential notion:
$(x)(Hx \rightarrow Sx) \ \& \ (\exists x)(Hx)$ = "Any x which exhibits H exhibits S and there is some x which exhibits H (and accordingly also S)"

B) Epistemic *Trairūpya*-notions

First condition:

I3: $sK<Hp>$ = "s knows that the *pakṣa* exhibits H = the logical reason"

I3*: $sKp[Hx]$ = "s knows of the *pakṣa* that it exhibits H"

Second condition:

I4: $sK<(\exists x)((x \neq p \ \& \ Sx) \ \& \ Hx)>$ = "s knows that there is some x which is different from the *pakṣa* and exhibits S and which exhibits H"

I5: $(\exists x)(x \neq p \ \& \ sKx[Sx \ \& \ Hx])$ = "There is some x different from the *pakṣa* of which s knows that it exhibits both S and H"

I5*: $(\exists x)sKx[(x \neq p \ \& \ Sx) \ \& \ Hx])$ = "There is some x of which s knows that it is different from the *pakṣa* and exhibits S and that it exhibits H"

Third condition:

I6: $sK<(x)(-Sx \rightarrow -Hx)>$ = "s knows that everything which does not exhibit S does not exhibit H"

I6*: $sK<(x)(-Sx \rightarrow -Hx) \ \& \ (\exists x)(-Sx)>$ = "s knows that everything which does not exhibit S does not exhibit H and that there there is something which does not exhibit S"

I7: $sK<(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx)>$ = "s knows that everything different from the *pakṣa* which does not exhibit S does not exhibit H"

I7*: $sK<(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx) \ \& \ (\exists x)(x \neq p \ \& \ -Sx)>$ = "s knows that everything different from the *pakṣa* which does not exhibit S does not exhibit H and that there is something different from the *pakṣa* which does not exhibit H"

I8: $(x)(sKx[-Sx] \rightarrow sKx[-Hx])$ = "If s knows of any thing that it does not exhibit S s knows of it (also) that it does not exhibit H"

I8*: $(x)(xKx[-Sx] \rightarrow sKx[-Hx]) \ \& \ (\exists x)(sKx[-Sx \ \& \ -Hx])$ = "If s knows of any thing that it does not exhibit S s knows of it (also) that it does not exhibit H and there is something of which s knows that it neither exhibits S nor H"

I9: $(x)((x \neq p \ \& \ sKx[-Sx]) \rightarrow sKx[-Hx])$ = "If s knows of any thing different from the *pakṣa* that it does not exhibit S s knows of it (also) that it does not exhibit H"

I9*: $(x)((x \neq p \ \& \ sKx[-Sx]) \rightarrow sKx[-Hx]) \ \& \ (\exists x)(x \neq p \ \& \ sKx[-Sx \ \& \ -Hx])$ = "If s knows of any thing different from the *pakṣa* that it does not exhibit S s knows of it (also) that it does not exhibit H and there is something different from the *pakṣa* of which s knows that it neither exhibits S nor H"

I10: $(x)(sKx[-Sx] \rightarrow -sKx[Hx])$ = "If s knows of any thing that it does not exhibit S it is not the case that s knows of it that it exhibits H"

I10*: $(x)(sKx[-Sx] \rightarrow -sKx[Hx]) \ \& \ (\exists x)(sKx[-Sx \ \& \ -Hx])$ = "If s knows of any thing that it does not exhibit S it is not the case that s knows of it that it exhibits H and there is something of which s knows that it neither exhibits S nor H"

I11: $(x)((x \neq p \ \& \ sKx[-Sx]) \rightarrow -sKx[Hx])$ = "If s knows of any thing different from the *pakṣa* that it does not exhibit S it is not the case that s knows of it that it exhibits H"

I11*: $(x)((x \neq p \ \& \ sKx[-Sx]) \rightarrow -sKx[Hx]) \ \& \ (\exists x)(x \neq p \ \& \ sKx[-Sx \ \& \ -Hx])$ = "If s knows of any thing different from the *pakṣa* that it does not exhibit S it is not the case that s knows of it that it exhibits H and there is something different from the *pakṣa* of which s knows that it neither exhibits S nor H"

C) Non-epistemic *Trairūpya*-conditions

First condition:

I12: Hp = "The *pakṣa* exhibits H"

Second condition:

I13: $(\exists x)(Sx \ \& \ Hx)$ = "There is something which exhibits S and H"

I14: $(\exists x)((x \neq p \ \& \ Sx) \ \& \ Hx)$ = "There is something different from the *pakṣa* which exhibits S and H"

Third condition:

I15: $(x)(-Sx \rightarrow -Hx)$ = "Anything which does not exhibit S does not exhibit H"

I15*: $(x)(-Sx \rightarrow -Hx) \ \& \ (\exists x)(-Sx)$ = "Anything which does not exhibit S does not exhibit H and there is something which does not exhibit S"

I16: $(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx)$ = "Anything different from the *pakṣa* which does not exhibit S does not exhibit H"

I16*: $(x)((x \neq p \ \& \ -Sx) \rightarrow -Hx) \ \& \ (\exists x)(x \neq p \ \& \ -Sx)$ = "Anything different from the *pakṣa* which does not exhibit S does not exhibit H and there is something different from the *pakṣa* which does not exhibit S"

II

The relationship between epistemic and non-epistemic versions of *Trairūpya*

1

In order to show how the epistemic variants of *Trairūpya* are suited to play the role of a mediating link for connecting the non-epistemic versions exemplified by the *Nyāyapraveśa* and other works according to our interpretation with the *avinābhāva*-notion, we shall first consider the relationship between epistemic and non-epistemic *Trairūpya*-versions.

At first glance, a simple answer obtrudes itself: The non-epistemic, "realistic" versions represent necessary conditions for the corresponding epistemic ones. This obviously holds good for the following pairs:
1)a) I12 — b) I3/I3*,
2)a) I14 — b) I4,
3)a) I14 — b) I5/I5*,
4)a) I15/I15* — b) I6/I6*,
5)a) I16/I16* — b) I7/I7*.
On the other hand such a diagnosis does not fit I8-I11 and the corresponding realistic variants. The fact that I15 and I16 do not represent necessary conditions for any of the conditions I8-I11 can be easily demonstrated in an exemplary manner by reflecting on the way in which I8 and I15 are related. If I15 is false, the state described by I8 can nevertheless obtain as long as the subject in question does not have knowledge with respect to all objects of the universe as to whether or not they exhibit the property to be proven ('S'). I8 would be fulfilled in case some person has by chance never come across any object not exhibiting the property to be proven, although there actually are instances which do not only lack this property but even exhibit the *probans* ('H') so that it does not hold that all objects not exhibiting the *probandum* also do not exhibit the *probans*. Does this prove that these alternatives should be regarded as less probable explications of the *vipakṣa*-condition in its epistemic form? This is certainly not so, but in order to bring out in a precise way the nature of the relationship between I8-11 on the one hand and I15-I16 on the other we will require some preliminary technical distinctions.

First of all, we must take notice of the fact that it was till now always tacitly presupposed that the schematic letter 'K' should be read in a temporal sense or that it represents a concept which involves a reference to a particular situation at some particular time. Since the epistemic variants of the *Trairūpya*-conditions could be understood as aiming at a description of the epistemic situation prevailing at the time of the carrying out of some inference or proof it is natural to assume that the reference in question relates to the time and the situation in which an inference or proof takes place. Therefore one can understand the letter 'K' as a symbol for a predicate synonymous with 'know(s) at time t' or 'know(s) in situation s_1'. Or

alternatively one might take the letter 's' in the above given formulas as representing a merger of two variables referring to two different aspects of epistemic situations, namely the subject and the other outer circumstances constituting the situational setting. For example, the formula I8: '(x)(sKx[-Sx] → sKx[-Hx]' could be expanded into: '(x)(s_1Ks_2x[-Sx] → s_1Ks_2[-Hx])' and accordingly read as "If s_1 knows in s_2 of any thing that it does not exhibit S (then) s_1 knows in s_2 of it (also) that it does not exhibit H". In the following we will adopt this view.

We can name the set of variables referring to the subject of epistemic predicates — which could also consists in groups of individuals — together with the variable(s) referring to the remainder of the situational circumstances 'the set of situational variables'. Any interpretation of the set of situational variables except the variable for the subject of the epistemic predicate(s) will be called 'background situation'. (It should be noted that it is not ruled out that background situations include references to the subject of the epistemic predicates). A syntactically well formed expression containing epistemic expressions — like 'believe (that)' , 'know (that)' etc. — in which all situational variables are uninterpreted is called an 'epistemic description formula', if it yields a complete sentence expressing an epistemic proposition if a) either the situational variables or b) the situational variables plus other (unbound) non-situational variables or schematic letters are interpreted. If case a) holds good one can label the expression 'epistemic description' (in the strict sense of the term). Thus 'epistemic description formula' has a relatively broad range of application since the term can be used both to refer to a sentence scheme like '(x)(s knows of x[-Fx] → s knows of x[-Gx]' and to expressions like '(x)(s knows of x[-x exhibits impermanence] → s knows of x[-x exhibits produced-ness]'[1], which are "epistemic descriptions" in the narrow sense where no uninterpreted (free) variables or schematic letters except the situational variable(s) occur. The formulas I3 - I11* are all epistemic description formulas in this sense provided that the letter 's' is understood as an uninterpreted variable — or schematic letter — and 'K' stands for *any* epistemic predicate. (Accordingly I3 — I11* would be also epistemic description formulas if 'K' were short for 'believe(s)' or if it represented a weakened notion of knowing which implies only belief and truth of what is believed but not anything regarding the justification or the genesis of the belief in question). Since the letters 'S' and 'H' in I3 — I11* (and in the other formulas as well) already involve a "functional interpretation" in the sense that 'S' symbolizes that some property plays the role of a *probandum* and 'H' that some property plays the role of a *probans*, we will use the term 'epistemic description' also for the epistemic description formulas of I3 — I11*. As long as it is kept in mind that this corresponds to an extended use of the term, no harm should arise from this way of speaking.[2]

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[1] Or, less artificially: '(x)(s knows of x[-x is impermanent] → s knows of x[-x is produced]'.

[2] The letters 'S' and 'H' could be viewed as representing functions from inference- or proof-situations into properties. Therefore e.g. the expression I8 '(x)(sKx[-Sx] → sKx[-Hx])' occupies an intermediate position between the sentence-schema '(x)(sKx[-Fx] → sKx[-Gx]', where 'F' and 'G' only mark the position of *any* predicate, and expressions like '(x)(sKx[-x is impermanent] → sKx[-x is produced])' etc.

Now we can introduce the notion of an epistemic state as the equivalence-class of all logically equivalent epistemic descriptions.[3] For example, the expressions I8: '(x)(sKx[-Sx] → sKx[-Hx]' and I8': '-(∃x)(sKx[-Sx] & -sKx[-Hx]' (= "If — in any situation σ — s knows of any x whatsoever that it does not exhibit S, (then) s knows (also) of x that it does not exhibit H" and "It is not the case that there is any x such that — in any situation σ — s knows of x that it does not exhibit S but does not know that it does not exhibit H") are logically equivalent and thus represent the same epistemic state. We can consider all sentences as logically equivalent if they necessarily have the same truth-value. Alternatively, one might also say that two expressions are logically equivalent if and only if all interpretations of all elements except the logical constants yield equivalent sentences = sentences representing propositions with the same truth-value provided that the same interpretations are given for all occurrences of the same letters. For example, in the case of I8 and I8' the logical constants are '(x)', '→', '-', '(∃)' and '&'; accordingly 'x', 's', 'K', 'S' and 'H' represent the elements which are not logical constants; but I8 and I8' are equivalent (possess the same truth-value) for all interpretations of 'x', 's', 'K', 'S' and 'H'.[4]

2

On the basis of the concept of epistemic state we can define three relations holding between propositions (or states-of-affairs) and epistemic states. Using '(s)' for representing universal quantification over (individual occurrences of) background-situations in the above explicated sense and writing 'P' and 'E' as a variables ranging over propositions and epistemic states respectively, we can first introduce the notion of guaranteeing an epistemic state by giving the following definition:

DE1: 'P guarantees E' $=_{def}$ '(s)(T(P) in s → E obtains in s)'

- 'T(P) in s' can be read as "P is true in s" or "P holds good in s". The expression 'E

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which result from substituting predicates expressing properties for the letter 'F' and 'G'.

[3] An equivalence-class is the set of all objects which are related by an equivalence-relation. Equivalence-relations are relations which exemplify the three properties of a) reflexivity — '(x)(xRx)', b) symmetry — '(x)(y)(xRy ↔ yRx)' — and c) transitivity — '(x)(y)(z)((xRy & yRz) → xRz)'. Logical equivalence exhibits these properties.

[4] Nevertheless, this fact does not entitle us to assume that also the expressions I6: 'sK<(x)(-Sx → -Hx)>' and I6': 'sK<-(∃x)(-Sx & Hx)>' (= "s knows that everything which does not exhibit S does not exhibit H" and "s knows that there is no thing which does not exhibit S but exhibits H") must also represent the same epistemic state. This is not so because I6 and I6' would be logically equivalent only under the supposition that knowledge of a proposition entails knowledge of all logically equivalent propositions. It is however doubtful that the ordinary concept of knowledge is a concept for which this theorem holds good, although one might of course *stipulate* concepts complying with that law which are related to the ordinary notion of knowledge if there should be any need for them. Anyhow, we will not presuppose that the epistemic notion embodied in the expressions *prasiddham*, *pramāṇataḥ* or similar ones deviate from the common knowledge-concept in this respect.

obtains in s' has to be understood as referring to the fact that some epistemic state exists in some situation. This means that there is some formula representing the corresponding state such that some interpretation assigning the situational variable to the corresponding situation makes it true.[5]

In order to explicate the remaining notions we must first introduce the concept of "knowledge-preservation" which will be defined as a relation holding between knowledge-situations. A situation S_1 is knowledge-preserving with respect to a situation S_2 precisely if everything known as true in S_1 is also known as true in S_2. More specifically we can say with respect to the above given epistemic formulas that any situation A is knowledge-preserving with respect to any situation B which is described by any expression or set of expressions resulting if all variables or schematic letters in the scope of 'K' except the background-variable are interpreted, i.e. the letters 'S' and 'H', the "subject-variable" and — in the case of I8 etc. the free occurrence of 'x' (or the letter 'p' in I7 etc.) — if a proposition holds good in A which is described by a sentence that deviates from the one describing the situation B at most in the interpretation of the subject-variable(s). For example the knowledge-situation described by 'Peter knows that the Taj Mahal does not exhibit occurrence of fire (on the date D)' would be preserved in any situation in which a proposition is true resulting by substituting any singular term for the variable 'x' in 'x knows that the Taj Mahal does not exhibit occurrence of fire (on the date D)'. According to this conception the relation of knowledge-preservation is reflexive; any situation is knowledge-preserving with respect to itself. A special case of knowledge-preservation would be knowledge-extension which does not allow for reflexivity and holds between situations in case a situation S_1 is not only knowledge-preserving with respect to a situation S_2 but also includes further knowledge not existing in S_2. It is however not necessary to elaborate this notion in further detail here.

With the help of the concept of knowledge-preservation we are able to elucidate two notions which will be important in our context. Representing the relation of knowledge-preservation by the expression 'x C y', to be read as 'x preserves/conserves all knowledge existing in y' one can define ideas of maintaining and of stabilizing epistemic states as follows:

DE2: 'P maintains E' $=_{def}$ '$(s_1)((T(P)$ in s_1 & E obtains in $s_1) \rightarrow (s_2)(s_2 \text{ C } s_1 \rightarrow$ E obtains in s_2))'

DE3: 'P stabilizes E' $=_{def}$ '$(s_1)((T(P)$ in s_1 & -(E obtains in s_1)) $\rightarrow (\exists s_2)(s_2 \text{ C } s_1$ & E obtains in s_2))'

The definiens of DE2 might be read as follows: "If P is true/holds good and an

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[5] A simple example would be the relationship between the proposition that the Taj Mahal is white and the epistemic state of not knowing that it is not white. The formula '-sK Taj Mahal [-White Taj Mahal]' as well as its more explicit variant '-sK in σ Taj Mahal [-White Taj Mahal]' would be true with respect to all situations in which it is true that the Taj Mahal is white, i.e. whenever 'σ' is assigned such a situation, irrespective of how the "subject variable" is interpreted. Therefore it must *a forteriori* hold good that some interpretation of the subject variable under the assignment of the background variable to any such situation makes the formula true.

epistemic state E obtains in some situation, E also obtains in any situation which preserves all knowledge existing in the former situation". The definiens of DE3 can be paraphrased in the following way: "If P is true/holds good and an epistemic state E does not obtain in some situation then there is some situation preserving all knowledge of the former situation in which E obtains". The notion of maintaining an epistemic state as defined in DE2 applies whenever some proposition or state-of-affairs guarantees that an epistemic state, if it exists at all in some situation, must persist in all other alternative situations in which no knowledge of the former situation is lost. The concept of stabilizing, on the other hand, allows for the possibility that an epistemic state obtaining in some situation A might cease to exist in some alternative situation B which exhibits a genuine increase of knowledge with respect to the former situation A; nevertheless if the relation defined in DE3 is instantiated it follows that some proposition or state-of-affairs ensures that there must always exist some other alternative state C which preserves all the knowledge of B and in which the epistemic state in question obtains. This implies that in all cases where the stabilization-relationship between a proposition or state-of-affairs and an epistemic state holds good the existence of the epistemic state, although it does not necessarily continue to exist after it has occurred once, can in principle always be restored by further extension of knowledge. It is not difficult to see that the relation defined in DE2 is weaker as the one explained in DE1 and that the notion of stabilizing is weaker than both the former ones. If the relation of guaranteeing or maintaining is exhibited the relation of stabilization must also be exhibited, but not vice versa.

For our purpose it is important that the above given definitions can be extended to propositional and epistemic structures represented by expressions containing schematic letters and uninterpreted variables. It is not difficult to see how this extension is to be achieved. On the basis of DE3 we can say that a propositional formula stabilizes an epistemic state structure iff all interpretations of free variables or schematic letters which fulfill the requirement that all occurrences of identical letters are given the same interpretation yield expressions representing propositions or epistemic states which stand in the relation of stabilizing as defined in DE3. Accordingly the notions of guaranteeing and maintaining can be extended. — On this basis it is not only possible to say that (the proposition expressed by): 'The Taj Mahal is white' both maintains and stabilizes the epistemic state of knowing that the Taj Mahal is white, but one can also affirm that 'P' maintains and stabilizes the epistemic state of knowing that P or that the condition represented in I12 'Hp' maintains and stabilizes the epistemic state of knowing that Hp which is (in this schematic form) described by I3.

With the help of the concept of stabilization it is possible to formulate the idea that some epistemic state is objectively stable in the sense that, if it occurs at all, it is always possible to restore it without any loss of knowledge. The following definition elucidates this notion:

DE4: 'E is objectively stable' $=_{def}$ '(∃P)(T(P) & P stabilizes E' (= "There is some true proposition/some actual state-of-affairs which stabilizes E")

3

The above defined concepts furnish new resources for the characterization of the relationship between the epistemic and non-epistemic *Trairūpya*-versions. In particular, they give us the possibility to describe the relationship between the pairs
1)a)I12 — b)I3/I3*,
2)a)I14 — b)I4,
3)a)I14 — b)I5/I5*,
4)a)I15/I15* — b)I6/I6*,
5)a)I16/I16* — b)I7/I7*
in other ways than in terms of necessary or sufficient conditions. We can not only say that the "realistic" versions represent necessary conditions of the corresponding epistemic ones, but the non-epistemic variants represent also propositions and states-of-affairs which maintain and therefore also stabilize the epistemic states described in the epistemic versions. If e.g. I12 'Hp' holds good in some interpretation the epistemic state of I3 or I3*, namely '*s*K<Hp>' or '*s*Kp[Hx]' (where '*s*' represents the set of situational *variables*) is objectively maintained and stabilized in all interpretations which assign to identical letters the same values as to the corresponding letters of I12. It should be noted that the epistemic states represented by I10 and I11 are guaranteed by the corresponding realistic *Trairūpya*-requirements I15 and I16. If for example I15 '(x)(-Sx → -Hx)' obtains the epistemic state represented by the formula '(x)*s*Kx[-Sx] → -*s*Kx[Hx]' is objectively guaranteed. For I15 says nothing else than that there is no entity (in the world) which does not exhibit S but exhibits H. But if this is true it must automatically also be true that it never occurs that someone is in an epistemic state where he knows of some entity that it does not exhibit S and knows of the same entity that it exhibits H. This shows that even in the realm of epistemic states which are relevant in the context of epistemic *Trairūpya*-conditions the relatively demanding notion of guaranteeing is by no means empty (in the sense that nothing exhibits the relation defined in DE1). The main importance of the newly defined concepts lies however in the fact that they enable us to give an account of the relationship between the epistemic versions of the third *Trairūpya*-conditions I8-I9* and their realistic counterparts. Since the epistemic *Trairūpya*-versions must probably be understood as formulations of requirements which have to be fulfilled in proper inference-situations, one should assume that the members of the pairs I8 - I9 and I8* - I9* practically amount to the same postulate. For as long as the thesis to be inferred or proven is not already known to be false the situation that somebody knows of something that it does not exhibit the *probandum* can only arise with respect to entities which are different from the *pakṣa*[6]. Despite the fact that this circumstance

[6] The only way in which a description of the form '*s*Kx[-Sx]' could apply to the *pakṣa* although it is not known *that* the *pakṣa* does not exhibit the *probandum* would be granted by a situation in which somebody knows *of* some entity which *actually* is the *pakṣa* that it does not exhibit the *probandum* without knowing that the entity in question is in fact nothing else but the subject of the inference or proof which is at stake. Nevertheless, since this is a rather unusual situation we can relegate it to the

makes it probable that Praśastapāda or any other author who formulated epistemic *Trairūpya*-conditions in the Indian tradition would never have taken pains to distinguish I8/I8* from I9/I9* the objective relationship with respect to the corresponding non-epistemic versions is not entirely identical. We can say that the epistemic states of I8 and I8* are stabilized by I15 and I15* respectively and the same holds good for I9 and I9* on the one hand and I16 as well as I16* on the other. Although I15 and I15* equally stabilize I9 and I9*, these conditions are stronger than they need to be in order to fulfill this function (since I16 and I16* suffice for the stabilization of the epistemic states of I9 and I9*).

The exact objective relationship between I8/I8* and I16/16* can be characterized if we introduce the notion of a non-deviant inference- (and proof-)situation. An inference-situation might be called deviant, iff the proposition to be inferred or proven is already known to be false or if its falsity is implicitly known on account of the circumstance that one knows *of* the very same thing to which some property is ascribed in the proposition to be inferred or proven that it does not exhibit the property concerned (cf. footnote above). Thus the concept of non-deviance excludes cases where one derives by inferential means propositions known to be false as an exercise in logic or for other purposes. Now we can say that I16 and I16* stabilize also I8 and I8* respectively not absolutely but relative to the supposition that the inference-situation is a non-deviant one. Alternatively it could be stated that I16 and I16* in conjunction with a proposition expressing the non-deviance of the inference-situation stabilize the epistemic state of I8 and I8* respectively.

4

This clarification enables us to remove the most serious obstacle to an acknowledgement of the *Trairūpya*-versions represented by I8/I8* and I9/I9* as acceptable explications of the third *Trairūpya*-condition in its epistemic form. It has turned out that the objective relationship between I8/I8*, I9/I9* and the realistic counterparts of the *vipakṣa*-condition cannot only be precisely described but can be also deemed as significant. The pairs 1)a)I12 - b)I3/I3*, 2)a)I14 - b)I4, 3)a)I14 - b)I5/I5*, 4)a)I15/I15* - b)I6/I6*, 5)a)I16/I16* - b)I7/I7* in the same manner as the pairs 6)a)I15/15* - b)I8/I8* and 7)a)I16/16* - b)I9/I9* are related in the way that the former members of the pairs stabilize the epistemic states contained in the corresponding epistemic versions. I16/16* can be attributed the function of stabilizing the epistemic state of I8/I8* under the supposition of non-deviant inference-situations. Whereas I15* and I16* stabilize and maintain the epistemic situations of I10* and I11* respectively, I15 and I16 represent conditions which even guarantee the epistemic situations described in I10 and I11.

These facts allow us to understand all the realistic *Trairūpya*-requirements as representing both necessary and sufficient conditions for the objective stability

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domain of deviant inference-situations together with the case where it is (*de dicto*) known that the *pakṣa* does not exhibit the *probandum*.

of the epistemic situations of some of the epistemic *Trairūpya*-versions. This does not mean that this relationships holds for all theoretically possible pairings between realistic conditions and epistemic conditions belonging to the same category of the three members of *Trairūpya*. For example I15: '(x)(-Sx → -Hx)' represents only a sufficient but not a both necessary and sufficient condition for the stability of the epistemic state of I9: '(x)((x ≠ p & *s*Kx[-Sx]) → *s*Kx[-Hx])'. For if the *pakṣa* were the only entity which exhibited both lack of the *probandum* and instantiation of the *probans* (i.e. if the *pakṣa* were the only entity exhibiting the property of '-Sx & Hx'), I15 would be false, but the epistemic situation described by I9 would still be a stable one, since under these circumstances the situation that somebody knows of a thing different from the *pakṣa* that it does not exhibit S without knowing that it also does not exhibit H would never be final in principle. Extension of knowledge would in principle necessarily lead to the knowledge that the entity in question in fact does not exhibit H and thus restore the epistemic situation described in I9. (One must bear in mind that the quantifications over knowledge-situations in DE2 and DE3 does not pertain to actual but potential ones). Nevertheless, if we match I9 with I16 instead of I15 the corresponding realistic and epistemic versions are related in the way that the former represents a necessary and sufficient condition for the epistemic state involved in the latter.

5

One important consequence of the above elucidations is the fact that a rationale for restrictive, realistic *vipakṣa*-conditions emerges. If the role of the realistic *Trairūpya*-version(s) lies in furnishing both sufficient and necessary conditions for the objective stability of epistemic states which are required for the acceptability of inferences and proofs and if restrictive variants are the most genuine representatives of the epistemic variety/varieties of the third *Trairūpya*-condition, then only the choice of one of the restrictive realistic *vipakṣa*-conditions, i.e. I16 or I16*, can be regarded as appropriate. The choice of restrictive versions would also most fit the epistemic variants I8 or I8* because in the context of the quest for criteria for the acceptability of arguments the supposition of the non-deviance of the inference-situation is most natural. Why should the non-restrictive variety of I15 or I15* be preferred if the intention lies in giving necessary and sufficient conditions for the epistemic situation describable as: 'it is not the case that there is something of which it is known that it does not exhibit the *probandum*, but exhibits the *probans* (and there is something which is known as exhibiting neither the *probans* not the *probandum*)', corresponding to I8/I8*? After all, the only reason for such a preference could lie in securing that the same epistemic situation must continue to obtain even if the *pakṣa* is known to that extent that the truth or falsity of the thesis to be inferred is (implicitly) also known. We have already seen that at least in Praśastapāda's case I8/I8* and its restrictive counterpart I9/I9* represent very probable readings of the third *Trairūpya*-condition.

As the restrictive character of the second condition is explicitly indicated by the formulation of the PB and since it is difficult to see which function any

epistemic version of this *Trairūpya*-mark which does not amount to knowledge of the instantiation of *probans* and *probandum* elsewhere than in the *pakṣa* should perform, the adoption of a restrictive realistic *sapakṣa*-version seems unavoidable on the supposition that realistic *Trairūpya*-versions have anything to do with their epistemic counterparts in form of necessary or sufficient conditions. I13, which says that there must be something exhibiting both the *probans* and the *probandum* is neither a necessary nor a sufficient condition of I4 or I5/I5*. Moreover, the fact stated in this version seems to be irrelevant for the epistemic situations described in I4 and I5/I5*, because the proposition represented by I13 could be true if only one entity in the world, namely the *pakṣa*, exhibited both the *probans* and the *probandum*. Therefore it is not unjustified to say that on the supposition of a connection between epistemic and non-epistemic *Trairūpya*-versions one possesses strong additional support for the assumption that the restrictive version of the realistic *sapakṣa*-condition must be adopted.

6

It is of course true that the existence of a significant objective relationship between epistemic and non-epistemic *Trairūpya*-versions does not yet prove that there is also historically a relationship between them. It follows even less that the relationship between both has been viewed anywhere in a way which corresponds to our explication. Nevertheless, the assumption of a historical relationship and the supposition that the above given explanation comes close to an outlook which had in fact once existed possess not little probability. For despite the technicalities which are needed for a precise elaboration and clarification of the notions of stabilization and objective stability of epistemic states, one must not overlook that *what* is thereby explicated corresponds to a very natural intuitive idea about the way the situations described in the epistemic *Trairūpya*-versions are based in non-epistemic aspects of reality. If the propositions expressed in the realistic *Trairūpya*-formulations are both necessary and sufficient conditions for the stabilization of the epistemic states described by epistemic *Trairūpya*-requirements their truth is both necessary and sufficient for the objective stability of those states. But the concept of objective stability or corresponding intuitive notions present themselves quite naturally in the present context. If the epistemic state prevailing in an inference-situation is objectively stable this means that any non-occurrence of this state betrays some lack of knowledge which does not ensue upon the mere fact that the inference-situation is a non-deviant one. Therefore for example I12 in relation to I3/I3*, I14 in relation to I5 and I16/I16* in relation to I9/I9* formulate state-of-affairs which guarantee that the fulfillment of the epistemic requirements is not ephemeral and only due to lack of relevant knowledge. Therefore they could also be viewed as necessary and sufficient conditions for the fact that the epistemic *Trairūpya*-condition were fulfilled in any situation of "maximal omniscience", where the term 'maximal omniscience' is meant to refer to precisely those states in which every theoretically possible knowledge is obtained except such knowledge the occurrence of which is incompatible with the idea of a non-deviant inference situation. The endeavour to discover necessary and sufficient conditions for

objective stability is so natural here also because it means to find a condition which is both required and guarantees that some arguer who meets the required epistemic demands cannot be contradicted on good grounds — at least as it is not definitely known by someone else on sufficiently strong evidence (of non-inferential nature) that the advocated thesis must be wrong. Whenever the non-epistemic *Trairūpya*-conditions are true, objections which do not already presuppose the falsity of the thesis to be proven could only be the result of lack of knowledge (if they are sincere at all).

The epistemic *Trairūpya*-conditions as they are exhibited in the PB — according to a plausible reading of the relevant textual passages — fit another conception of the theoretical status of *Trairūpya* than the non-epistemic ones. The epistemic variants can be understood as referring to the question, which situational features must obtain if the *act* of inferring or arguing in a particular way can be considered as appropriate or justified. The non-epistemic conditions, on the other hand, should be taken as answers to the question as to which objective, non-epistemic features the proposition on which inferences are grounded or which is stated as the justifying reason in arguments must fulfill in order that the occurrence of that relevant feature of epistemic states is guaranteed which makes acts of inferences and arguments acceptable. These propositional features are however formulated in terms of non-epistemic properties of the logical reason conceived as a *dharma* exhibited by entities of different kinds. Accordingly, whereas the epistemic versions relate to features of acts of inferences and proofs the realistic versions relate to features of their content.

In this way it turns out that epistemic and non-epistemic *Trairūpya*-versions can be regarded as fulfilling different functions and can be credited with a significant theoretical status in the framework of inferences and proofs. However, the attribution of the above described roles to the two types of *Trairūpya*-conditions does not merely represent a theoretically given possibility, but there are sufficiently plausible reasons for the assumption that similar considerations were associated with *Trairūpya*-doctrines of the one or the other form by the authors who advocated them. Since the supposition is not unlikely that the realistic *Trairūpya*-versions were historically based upon a conception akin to the notion of objective stability of epistemic states as explicated above, there is no more any compelling reason to assume that the fact that some textual passages represent non-epistemic *Trairūpya*-formulations is due to sloppiness.

III

Epistemic *Trairūpya*-conditions and *Avinābhāva*

1

Despite the clarification of the relationship between epistemic and realistic *Trairūpya*-versions and the possibility to explain the occurrence of the latter on the basis of requirements as formulated in the epistemic variants the existence of *Trairūpya*-doctrines containing elements from the group of I12 - I16 is not made fully intelligible as long as it is unclear what purpose the epistemic conditions formulated in I3 - I11 could fulfill.

Although there is no *a priori* necessity to base the justification for the epistemic *Trairūpya*-conditions on a special relationship with the notion of *avinābhāva*, the assumption that such a relationship both exists and could bestow a raison d'être on the epistemic *Trairūpya*-versions does not appear unfounded.

Some of the epistemic *Trairūpya*-conditions exhibit an obvious relationship to the *avinābhāva*-concept. I6, and I6* logically entail the weaker variant of *avinābhāva*, which is formulated in I1. On the other hand I1 guarantees the epistemic states of I10 and I11, maintains the epistemic states of I6 and I7 and stabilizes the states of I8 and I9. But this would not explain the occurrence of the other conditions, in particular the *sapakṣa*-condition, in epistemic variants. It is true that even the stronger *avinābhāva*-variant represented by I2 would be logically implied by the conjunction of I6 or I6* and one of the propositions of the group I4-I5*, which formulate epistemic versions of the second condition. But the idea that some logical relationship is at stake raises the problem, why the *sapakṣa*-conditions are given a restrictive form, and, if this should have been the consequence of their epistemic nature, why epistemic versions of the second condition occur at all.

It seems therefore more reasonable to suspect the relevant connection between epistemic *Trairūpya*-conditions and the *avinābhāva*-notion somewhere else than in logical entailment-relationships. Since the epistemic *Trairūpya*-conditions contain knowledge-predicates it is natural to suppose that their function lies in giving epistemic conditions which warrant the assumption that some state-of-affairs holds good. Since the first *Trairūpya*-condition obviously gives little warranting support for the occurrence of an *avinābhāva*-relationship, the main burden should be carried by the conditions two and three. But how can the fact that somebody knows with respect to some instance different from the *pakṣa* that both the property to be proven and the proving property are exhibited play the role of giving support for the assumption that both properties stand in an *avinābhāva*-relation, and why should the support, if it exists, be relevant enough in order to justify the second *Trairūpya*-condition in its epistemic form as a requirement for the acceptability of inferences and proofs?

2

The supposition that the second epistemic *Trairūpya*-condition constitutes an indispensable ingredient for warranting the assumption of an *avinābhāva*-relation is equivalent to the assumption that knowledge of the co-occurrence of properties in some instances gives a relevant support for the assumption of an *avinābhāva*-relation between them. But how can this supposition be plausible in view of the existence of *vipakṣa*-conditions? Because of the entailment-relationships between I6/I6* and I1 and since I7 and I7* imply a proposition which amounts to the fact that *avinābhāva* holds at least in all instances except the *pakṣa*, the conditions formulated in I5 - I5* should be deemed insignificant. For the latter ones represent merely an existential claim with reference to the domain of entities which are different from the *pakṣa*.

Nevertheless, the matter looks somewhat different, if one considers the epistemic variants represented in I8 - I11. The hypothesis that members of this group are the genuine representatives of the epistemic *vipakṣa*-condition has, however, a remarkable consequence. If it is supposed that the situations described in I8 - I11* have been regarded as giving warranting support for the assumption of *avinābhāva*-relations it appears hardly avoidable to attribute to the Indian theorists the view that knowledge about the non-occurrence of combinations between non-exemplification of a property F and exemplification of a property G, or alternatively the non-existence of any knowledge to the effect that F is not exemplified and G is exemplified in some instance has a bearing upon the degree in which the assumption of an *avinābhāva*-relation between G and F is warranted. In view of the fact that e.g. I8 '(x)(sKx[-Sx] → sKx[-Hx])' entails '(x)(sKx[Hx] → -sKx[-Sx])', i.e. a statement to the effect that all entities known as exhibiting the *probans* are never known as lacking the *probandum* such an assumption might not appear implausible. But since all members of I8 - I11* imply that the occurrence of the *probans* has never been observed together with the non-occurrence of the *probandum* one might wonder, why there should be any need for the requirement that *probans* and *probandum* must be known to exist together somewhere in the realm outside the *pakṣa*, *if* the above described non-observance of co-occurrence is already credited with relevance for the warranted-ness of the assumption of *avinābhāva*. But such a need can in fact be demonstrated.

The need is given if one assumes that the warrant for *avinābhāva* must exhibit a narrowly inductive nature. This means that a universal proposition of the form exhibited by I1 or the universal component of I2 must be exclusively supported by distributive facts regarding the occurrence and non-occurrence of properties. In case of a proposition of the form '(x)(Fx → Gx)' only two properties are involved. Since I1 and the universal constituent of I2 exhibit this form the support must lie in the way the *probans* and the *probandum* are distributed in their occurrence. The four cases a) H & S, b) -H & -S, c) H & -S and d) -H & S represent all theoretical possibilities in which the relevant properties can be instantiated. Now it is easy to see that without any instance exemplifying the co-occurrence-type a) there remain only instances of non-occurrence of H and instances of occurrence of H together with non-occurrence of S as theoretical possibilities. But the third epistemic

Trairūpya-condition rules out the possibility of any knowledge of a co-occurrence situation of the latter type, i.e. of an occurrence of H together with non-occurrence of S. Consequently, only the cases b) and d) remain as possible types of known co-occurrence situations. But this means that the assumption of an *avinābhāva*-relation would have to be based entirely on cases where the *probans*, H, is not exemplified. Now, cases of the type d) could give support for the assumption that H is never exemplified if S is not exemplified at best insofar as they give support for the assumption that S is everywhere instantiated because only under this supposition it is warranted to derive that S must be equally exhibited by cases where H is exhibited. Although it is perhaps true that sometimes instances exhibiting a co-occurrence of F and G give support for the assumption of a universal or almost universal instantiation of G, and accordingly the co-occurrence of -H and S support for a (nearly) universal instantiation of S, this support could not rely on distributive facts alone in a situation where the distribution-types a) and c) are not known as being instantiated. Support might possibly exist by virtue of considerations regarding laws of nature even in the described situation, but this is irrelevant in the case of a theory which bases inductive support entirely on distributive facts. The remaining type b) can even less perform the function of supporting the assumption of an *avinābhāva*-relation. Despite the fact that the combination '-H & -S' gives support for the proposition '(x)(Hx → Sx)' to the same extent as it gives support for the proposition '(x)(-Sx → -Hx)' (because of their logical equivalence), the support can never be sufficient because it is counterbalanced: To whatever degree the proposition that all Hs are Ss is inductively supported by instances exhibiting neither H nor S, at least to the same degree these instances render inductive support for the non-occurrence of S. In so far as instances exhibiting the combination '-H & S' do not alone support the assumption of '(x)(Hx → Sx)', the conjunction of instances exhibiting this combination and instances exhibiting the combination '-H & -S' give even less such a support because cases of the latter type block the possibility of an universal instantiation of 'S'. Since case c) must be excluded because its occurrence would definitely falsify any hypothesis of *avinābhāva*, only instances of the type a) can offer the needed help. But the knowledge of the existence of such instances amounts to the fulfillment of the second epistemic *Trairūpya*-condition in all genuine inference situations (i.e. if it is not known beforehand that the *pakṣa* exhibits both the *probans* and the *probandum*).

Thus the requirement of the second mark of *Trairūpya* in its epistemic form turns out to be indispensable under certain suppositions regarding the nature of the possible support for the assumption of an *avinābhāva*-relation. Its indispensability arises given the postulate that the support must be of a narrowly inductive nature and purely consists of distributive facts. Thus a *Trairūpya*-doctrine which contains epistemic variants of the second and the third condition would fit a conception according to which the *Trairūpya*-requirements give — among other things — conditions for the warranted assumption of an *avinābhāva*-relation and conceive the warrant as a not counterbalanced inductive support purely based on distributive facts.

3

According to the non-asterisked variants of I8 - I11 the conditions two and three together would amount to the requirement that instances of type a) but no instances of type c) must be known. According to the corresponding asterisked versions the knowledge of instances of type a) and of type b) and non-knowledge of instances of type c) were demanded. The occurrence or non-occurrence of knowledge of instances of type d) is left unspecified in both cases. Since on the supposition of the asterisked variants of the third epistemic *Trairūpya*-condition cases where the *probandum* is universally exemplified are ruled out, one might be inclined to suppose that these variants fit a more narrow conception of *avinābhāva* according to which this relation is not exemplified if at least one of the relevant properties is universally instantiated. It is indeed possible to define such a narrower notion of *avinābhāva* in precise terms. It could be called 'significant *avinābhāva*' and is definable in the following manner:

DAS: H stands in a significant *avinābhāva*-relation to S $=_{def}$
$(x)(Hx \rightarrow Sx) \ \& \ (\exists x)\text{-}Sx$

In a similar way one can introduce a significant *avinābhāva*-variant for the *avinābhāva*-notion with existential import, corresponding to I2. It is true that such a narrower conception would be natural because it corresponds to the idea that the connection between the two relevant properties is a genuine one in the sense that the occurrence of the one property really depends on the occurrence of the other property. Nevertheless, it would be rash to derive the thesis that such a modified account of the concept of *avinābhāva* must be given from the assumption that one of the asterisked variants give the most adequate explication of the third *Trairūpya*-condition. For if the third condition in its epistemic form should have been meant in the sense of one of the asterisked varieties this must not be due to the fact that the *concept* of invariable concomitance was conceived in the narrow manner; it can be also due to the fact that the range of the application of inferences has been conceived narrowly. For it could be argued that inference loses its genuine function in cases where universally instantiated properties are at stake. This is plausible at least for purely inductive conceptions of inference, because any support for the conditional '$(x)(Hx \rightarrow Sx)$' would *eo ipso* be a support for the non-conditional proposition '$(x)Sx$', if 'S' is universally instantiated. Any "derivation" of the occurrence of the *probandum* in a particular instance from the occurrence of some other property in the same instance would be pointless for similar reasons as statements of the form 'If P, then Q' are misleading if it is assumed that the proposition occurring in the place of 'Q' is true irrespective of whether 'P' holds good or not.

4

The thesis might be debatable that mere "distributive" knowledge of the kind that one knows 'H' and 'S' as co-occurring somewhere but not 'H' and '-S' or that one knows both 'H' and 'S' and '-H' and '-S' but not 'H' and '-S' as "co-instantiated" really constitutes a proper support for the assumption of *avinābhāva*. One might also bring forward that the theory of the three *Trairūpya*-conditions is yet too crude

as a theory of inductive justification. The second *Trairūpya*-condition expresses merely the demand that the co-occurrence of the *probans* and the *probandum* must be known as exhibited in at least one instance. But in the framework of an inductive theory the difference of support corresponding to the smaller or greater number of supporting instances should be taken into account. It should make a difference after all, whether the co-occurrence has been observed in only one case or whether it has been ascertained in ten, in thousand or in ten thousand cases, even under the supposition that the occurrence of the *probans* together with the non-occurrence of the *probandum* has not been observed in a single case.

Nevertheless, the thought that the fulfillment of the epistemic conditions formulated in I4 or I5/I5* together with one of the members of I8 - I11* yields a justifying warrant for the assumption of an *avinābhāva*-relation opens an interesting perspective for the epistemology of universal propositions. It suggests the idea that knowledge of co-occurrence patterns could represent a basis for knowledge of universal propositions. If we leave the possible inadequacies of the *Trairūpya*-theory which we mentioned above out of account for the moment, we might be prompted to adopt some view like the following one: Whenever somebody fulfills the requirement laid down in I8 that whenever he knows of some entity that it does not exhibit S he also knows of it that it does not exhibit H and if he furthermore knows that something exhibits both S and H, corresponding to the requirement of the epistemic *sapakṣa* condition, (where the fact that this knowledge must pertain to some entity different from the *pakṣa* follows only from the additional premise that a genuine inference-situation occurs), then he can be credited with the knowledge that an *avinābhāva*-relation obtains between H and S, provided that he believes and that it is in fact true that all instances exhibiting H also exhibit S. He might be credited with this knowledge, one might argue, because knowledge demands precisely that one believes something which is true and that the belief is generated in a way which, although not infallibly, but generally and in the long run mostly leads to true beliefs. Of course, in the given case everything depends on whether knowledge of co-occurrence of S and H together with the fact that all instances known as being not-S are also known as being not-H really fulfills the condition that in a significant majority of cases true beliefs are generated if the rule of deriving corresponding *avinābhāva*-beliefs on its basis were put into general practice and one might doubt this. But even if this should be so, the underlying idea of basing knowledge of universal propositions on knowledge of co-occurrence patterns would not lose its interest.

5

However, in the present context more important than the question, whether or not the sketched manner of generating knowledge of (certain kinds of) universal propositions is viable in the final analysis, is the fact that the idea shows us a way as to how an account of the possibility of knowledge of universal propositions could be achieved with the building material of the Indian theory of inference. We had already pointed out the problems arising from the assumption that the third *Trairūpya*-condition in Praśastapādas theory had the import of I6, which requires that one knows that all entities not exhibiting the *probandum* do not exhibit the

probans. The fact that the *avinābhāva*-proposition of I1 is logically equivalent to the object of knowledge in I6 causes that the option of basing knowledge of *avinābhāva* on epistemic states corresponding to the second and the third *Trairūpya*-condition in one of the versions of I8 - I11* is also relevant for the problem of the possibility of the knowledge state involved in I6. The connection is established if it is hypostatized that grounds for knowledge of some universal proposition can sometimes also be grounds for the knowledge of a logically equivalent proposition, and that this (at least sometimes) obtains in the case of the pair: 'Every H is S' and 'Every not-S is not-H'. This means that a solution of the problem of the possibility of the knowledge of the general proposition contained in I6 can be construed on the basis of the idea of an epistemic *Trairūpya*-theory consisting of elements taken from the sets of I4 - I5* and I8 - I11*.

There is nothing which indicates that Praśastapāda or anyone of his contemporaries conceived of this possibility. On the other hand, it appears not improbable that the phrase *anumeyaviparīte ca sarvasmin pramānato 'sad eva* which occurs as a formulation of the third *Trairūpya*-condition at the beginning of the *anumāna*-section in the PB at least *also* aimed at a requirement identical with or similar to that of I6. The formulation blurs however the distinction between I6 and the propositions of the group I8 - I11*. But now we can see that a clear differentiation between the different possible senses of this formulation could have opened perspectives for the problem as to how knowledge of propositions of the kind of the object-constituent in I6 is possible. One can even assert that such a differentiation would have brought the significance of this problem to light. Thus we are enabled to understand the negligence of the issue of the possibility of knowledge of universal propositions in the *anumāna*-section of the PB and elsewhere as a missed opportunity. Certainly it should have been quite difficult for Praśastapāda or any other author of his time to give a clear account of the involved differences without the resources of modern symbolic logic. But this fact only shows the increase of potency of the analytical equipment which has been achieved in the meantime. Surely, the proposed account of knowledge of universal propositions would hardly fit the framework of Praśastapāda's epistemology, and the same can be said with respect to the epistemological theories of his time in general. The neglect of universal propositions in ancient Indian epistemology was after all to a large extent the result of a too crude conception of knowledge as knowledge of objects.

IV

The historical basis of *Avinābhāva* and *Trairūpya*

We have tried to explicate the relationship between the doctrine of *Trairūpya* and the notion of *avinābhāva* and attempted to make intelligible the existence of the epistemic *Trairūpya*-requirements and indirectly the existence of its non-epistemic counterparts. But all this does not yet show, how and on what grounds the notion of *avinābhāva* originated and why it could have played the role of being relevant for the origination of the *Trairūpya*-theory. It is probable that the phenomena are due to a specific development in the conception about the nature of inference. On the hypothesis of this kind of evolution we can also give an account of the existence of the first *Trairūpya*-condition.

In the *Ṣaṣṭitantra*, a work which has been ascribed to the Sāṃkhya master Vārṣagaṇya, one finds a definition of inference which is supposed to be very old in its origin. It runs:

DA: *sambandhād ekasmāt pratyakṣāc cheṣasiddhir anumānam*
"Inference is the establishment of the/a rest from something perceived/perceivable on account of a certain connection"[7]

In the text (as it is reconstructed) immediately after this definition seven kinds of connection are enumerated and explained by examples. These connections characterize relata as standing in particular relations, e.g. the relation of master and his belongings (*svasvāmibhāva*), of primary matter and its transformation (*prakṛtivikārabhāva*) and so on. It seems that it has not been explained in the text whether or not all the cited types of connection have something in common and in what such a common feature might consist. But it is obviously natural to raise this question. Probably this question has also been posed quite soon and we have reason to suppose that at least one answer which was given was that the connection consisted in the fact that wherever the first relatum occurs the second one must occur too. Or more precisely: Wherever something of some kind occurs something of some other kind must also occur. Thus in the process of giving an account of the fundamental and common nature of all types of connection the conception of the kind of *sambandha* which is relevant for inference has become, so to speak, "extensionalized". But this extensionalized conception of connection was nothing but the notion of *avinābhāva*. Because of the naturalness of the development from the idea of different types of *sambandha* to the notion of invariable connection there is no reason to suppose on *a priori* grounds that the concept of *avinābhāva* must be relatively late. Accordingly there should also be no compelling ground for the assumption that the initially cited definitions of a logical reason and of inference

[7] Cf. E. Frauwallner 1958:123. (There is a probably corrupt variant *sambaddhād* instead of *sambandhād*).

in Vasubandhu's *Vādavidhi* cannot be taken in their most natural and literal sense.

But a closer look at the precise wording of the above quoted *Ṣaṣṭitantra*-definition of inference reveals that more was involved in inference than deriving the occurrence of something from something else which stood in a *sambandha*-relationship to the other entity. Not only the circumstance that according to the *Ṣaṣṭitantra* the indicating entity must be perceived — or be perceptible — is significant. More important is the fact that the use of the *ablative* form *sambandhād* — instead of a *locative* (or *locativus absolutus*) *sambandhe (sati)* which could also be expected — obviously indicates that inference does not merely require that a connection/*sambandha* obtains, but also demands that inference is carried through *on the basis of* this connection. Even if there were not such a formulation the adoption of such a view would be very natural. But since the thought that the undertaking of inference has to rely on an *avinābhāva*-connection amounts to the postulate that the existence of this relation must be known or at least its assumption be warranted the problem of how it is possible to have knowledge or justifying reasons to assume the fact that *avinābhāva* obtains arises.

Now we are in the position to discern that the adoption of the *Trairūpya*-theory in connection with this issue implicitly involves a number of decisions regarding the manner in which the possibility of the relevant knowledge or justification has to be accounted for. The first crucial step consists in the assumption that the justificative warrant is of an inductive nature and the second crucial step lies in the supposition that the inductive basis has to consist of "distributive" facts regarding the way *probans* and *probandum* occur or do not occur together. The first step of assuming an inductive basis does not yet necessitate the establishment of requirements like those represented by the second and third epistemic *Trairūpya*-conditions. For there can be an inductive basis for the assumption of a universal proposition of the type '$(x)(Fx \rightarrow Gx)$' = "All F's are G" even if, contrary to what the epistemic version of the second condition demands, an instance where F and G occur together has never been observed till present. One can posses the knowledge that whenever the mercury of a thermometer rises to a particular height the air has a particular temperature without previously observing any co-occurrence of this particular height with this particular temperature. Nevertheless, the universal proposition that at all times where the mercury column is (for some period of time) at position m the air has the temperature n can possess an inductive basis because they are derivable from some quantitative hypothesis assigning to each position on a scale a particular degree of temperature which is inductively supported by the observation of correlations between the rise of mercury and temperature. Therefore the most crucial step lies in the non-acknowledgement of any kind of indirect inductive support and in the postulate that inductive support *must* be given in a direct form by observations of instantiations of the terms of any universal proposition themselves. Because of the aforementioned fact that observation of instances where both terms do not occur yields counterbalanced support — by inductively supporting non-occurrence of the *probandum* in other cases — such instances alone cannot constitute the inductive basis of the required direct sort. Observation of instances not exhibiting the *probans* but exhibiting the *probandum* cannot improve the situation to a relevant degree because they merely show that

it is at least possible that the *probandum* occurs. Therefore without any larger theoretical framework which allows one to interpret the facts in other ways instances of this latter kind neither by themselves nor in combination with instances of the former kind (those exhibiting neither the *probans* nor the *probandum*) can be considered as yielding inductive support for an invariable connection between *probans* and *probandum*. Therefore given this basis it is as good as unavoidable that the idea emerges that the assumption of a *sambandha* = *avinābhāva* is only warranted if the *sambandha* itself has been formerly observed in the form of an observation of the co-occurrence of the relata. But this means that the kind of situation described in (the variants of) the second epistemic *Trairūpya*-condition must obtain.

It is well known that the postulate of a previous observation of the connection between *probans* and *probandum* in the form that both relata must have been observed together has been explicitly brought forward against proofs which allegedly violated this requirement. In the 18. chapter of the commentary on Nāgārjuna's *Mūlamadhyamakakārikās*, ascribed to an author called Qing-mu (*Piṅgala/*Vimalākṣa?), it is objected against a proof of the existence of the *ātman* on the basis of a *sāmānyatodṛṣṭa*-inference that *probans* (the five *skandhas*) and *probandum* (the *ātman*) have never been observed together so that one cannot infer the existence of the *ātman* in some particular case where one only observes the *probans* (the *skandhas*). This passage together with a number of other sources suggest that at some time a reflection on the acceptability-conditions of inferences took place which had led to the result that certain inferences could not be accepted on account of the fact that they violated the requirement of a previous observation of the co-occurrence of indicator and indicated. There is also strong support for the assumption that this requirement had not always been observed and has not always been considered as necessary. It is noteworthy that the manner in which the canonical form of the five-membered syllogism is formulated does not only not require the doctrine of previous observation of *probans* and *probandum* but even suggests a more liberal conception. There are also good reasons to believe that the category of *sāmānyatodṛṣṭa*-inferences at a certain stage referred precisely to cases where the requirement was not met but which were nevertheless regarded as valid at some time.[8]

The remarks of the previous paragraph showed that the demand for previous observation of instances of co-occurrence of the relata of a *sambandha*-relation is unwarranted and imposes unduly strong restrictions. On the other hand we were able to see how this postulate could originate and that it is in the final analysis related to the problem of the possibility of knowledge of universally quantified propositions of the form '$(x)(Fx \rightarrow Gx)$' and that it is based on an extremely narrow

[8] As I intend to deal with the question of the theoretical conception of inference which possibly underlies the doctrine of the five membered syllogism in another paper, I will refrain from discussing this issue in more detail here. The fact that the category of *sāmānyatodṛṣṭa*-inferences is probably specifically related to inferences where the condition of previous observance of the co-occurrence of *probans* and *probandum* is not met and *can not* be met because proofs of principally non-observable metaphysical entities are at stake has been pointed out to me by Claudius Nenninger.

conception of inductive support.

It is thus possible to refer the three epistemic *Trairūpya*-conditions to three aspects of the above quoted *anumāna*-definition of the *Ṣaṣṭitantra*: *sambandhād ekasmāt pratyakṣac cheṣasiddhir anumānam*. The first *Trairūpya*-condition relates to the component *pratyakṣāc*, in so far as it conveys that the *probans* must be perceived — and not only be perceptible. The condition that it must be known that the *probans* occurs in the *pakṣa* or that the *pakṣa* is known as exhibiting the *probans* ensues upon a slight liberalization of the requirement laid down in the *Ṣaṣṭitantra*-definition. The demand of being perceived must only be modified to the demand of being known by *any* means of knowledge. This allows for the possibility, which has been in fact granted by later theoreticians, that the occurrence of the *probans* in the *pakṣa* might be inferred. The third *Trairūpya*-condition refers to the aspect involved in the expression *sambandhād* that a proper inference requires the *existence* of a *sambandha*. It evolves from the explication of *sambandha* as invariable concomitance. The theorem that invariable concomitance = *avinābhāva* between *probans* and *probandum* obtains implies that the epistemic situation described in the third condition is (provided that no deviant inference-situation exists) either guaranteed or always restorable without any loss of knowledge, if the variants I10, I11 or I8, I9 are adopted. The second epistemic *Trairūpya*-condition is specifically related to the *ablative*-form of *sambandhād*. It results from the idea that *sambandha* must not only exist but also be known or warrantedly assumed to exist. Since the non-epistemic *Trairūpya*-versions have turned out to be significantly related to the epistemic ones and as the concept of *avinābhāva* emerges as the result of an explication of the nature of *sambandha*, all theoretical notions have been connected in a more or less direct manner with the *Ṣaṣṭitantra*-definition of inference. In this way a systematic organization of all the types of theoretical concepts has been achieved.

PART V

SVABHĀVAPRATIBANDHA AS A FOUNDATION OF *AVINĀBHĀVA*

The Ontological and Epistemological Aspect of Dharmakīrti's Doctrine of *Svabhāvapratibandha*

Although the exploration of Dharmakīrti's logical theory is not the object of our treatise — which is considered as an investigation of the "classical" stage of the period between Vasubandhu and Dharmakīrti — a few remarks regarding Dharmakīrti's conception of *svabhāvapratibandha* are appropriate because of the fact that this notion implies the possibility of an alternative account of the problem as to how acquisition of knowledge of universal propositions is possible. We regard it as justifiable to abstain from going into the details of the interpretation of Dharmakīrti's philosophical texts, because the subsequent remarks will preserve their relevance even if they were historically partly incorrect. If it turned out that neither the author who introduced the concept of *svabhāvapratibandha* into the theory of inference nor anyone else who represented the same tradition of thought attributed the same role to this idea which we attribute to it, our account could still retain its significance as an explication of some possibility of exploiting resources of a notion which has not been realized. After all, the exploration of alternatives and of the inherent potentialities of philosophical concepts, theorems and doctrines, whether they have been actualized in the foreign tradition or not, is now and then required, if investigations of Non-European philosophical traditions do not want to confine themself entirely to cartographical activities.

It is our thesis that Dharmakīrti's doctrine of *svabhāvapratibandha* offers a foundation for *avinābhāva* in two different ways. First it represents an account of the possibility of the *existence* of *avinābhāva* and secondly it presents us with an account of the possibility of the knowledge of its existence and therewith of the possibility of possessing knowledge of at least some type of universal propositions.

Dharmakīrti's doctrine of the three types of logical reasons and of the two types of *svabhāvapratibandha* as well as of the relationship between them is well known. Whereas the category of logical reasons of the kind *kāryahetu* corresponds to the *svabhāvapratibandha*-category *tadutpatti*, the kinds of logical reasons which are called *svabhāvahetu* and *anupalabdhihetu* relate to the *svabhāvapratibandha*-category of *tādātmya*.

Now, it seems almost certain that Dharmakīrti regarded the "essential connection" = *svabhāvapratibandha*, as something which makes "invariable concomitance" = *avinābhāva* possible. This means that the connections of *tadutpatti* = "origination from that [which is to be inferred]" and of *tādātmya* = "having that [which is to be inferred] as [its] essence" do not only describe two ways in which invariably connected entities can be related but also contain the information about why the phenomenon of *avinābhāva* occurs at all — or at least why it can occur on some other basis than mere coincidence. There are a number of cases where some *dharma* D_1 is invariably connected with some *dharma* D_2, the answer runs, because the world is constituted in such a way that sometimes entities are causally or "essentially" related. There appears to be nothing in the theories previous to Dharmakīrti which parallels such an account. On the basis of the earlier views it was nothing but a mystery, why the fact that entities are invariably connected in a number of cases should increase the probability that they are also connected in

further cases. (The fact that one has played twice and won twice in a lottery does unfortunately not increase the probability that one will win in further cases, *if* no magic is at work).

The theory of *svabhāvapratibandha* is also able to explain, *why* the knowledge-situations described by the epistemic *Trairūpya*-conditions I4 - I5/I5* together with I8/I8* - I11/I11* can be regarded as constituting a warrant for the assumption of an *avinābhāva*-relation. This is possible precisely because the occurrence of these epistemic situations can be understood as being due to the existence of a *svabhāvapratibandha* and thus indicate that this connection holds between two particular *dharmas*. Without this account it is entirely unclear why some observed co-occurrence pattern between entities should possess any prognostic value. This does not mean that the account offered by Dharmakīrti's notion of *svabhāvapratibandha* represents the only possible way of explaining the possibility of "inductive extensions" of the described sort. It means however that *something* playing the role of this account is required and that the earlier theories apparently offered no account of this problem at all.

No matter how this may be, the notion of *svabhāvapratibandha* is not only suited to lay an "ontological" foundation for *avinābhāva*, it can also play a role in the context of an explanation of how knowledge of universal propositions of the form '(x)(Fx → Gx)' is possible. This means that it can perform the function of explaining the possibility of the fulfillment of the requirement formulated in I6 or I6*. The doctrine of *svabhāvapratibandha* can play this role in the form that the knowledge situation described in I6 is possible because of the possibility of knowledge that *svabhāvapratibandha* is instantiated. But there are reasons to assume that this is not merely any theoretically given possibility but corresponds to thoughts which Dharmakīrti actually entertained concerning this issue.

In the *kārikā* 27 of the *Pramāṇavārttika* Dharmakīrti makes the following statement:

> *tadbhāvahetubhāvau hi dṛṣṭānte tadavedinaḥ /*
> *khyāpyete vidūṣāṃ vācyo hetur eva hi kevalaḥ //*

which must probably be translated as follows: "For in the example the (fact of) being this [very same thing in the form of being its *svabhāva*] [or] the (fact of) being its cause are told to the one who does not know [these facts and only to such persons] because to those who know [this] only the logical reason has to be stated."

Together with the corresponding explanations of this verse in Dharmakīrti's own *Svavṛtti* this passage suggests the following picture: Examples serve the purpose of demonstrating that either the one or the other of the two types of *svabhāva-pratibandha* is instantiated in some particular case. Their citation is required as long as somebody does not yet know that *svabhāvapratibandha* obtains. As soon as this is known, however, citation of examples becomes superfluous and the mere knowledge that the logical reason is instantiated in the *pakṣa* gives sufficient warrant that the thesis to be inferred is true. This means that we have a conception of epistemic requirements which in its function corresponds to the epistemic *Trairūpya*-conditions of Praśastapāda's theory, but exhibits highly significant differences in its content. Instead of the three requirements that a) the *probans* is

known to occur in the *pakṣa*, b) that some instance is known as one which exhibits both the *probans* and the *probandum* and c) that whenever the *probandum* is known not to occur it is also known that the *probans* does not occur (or that in all instances where it is known that the *probandum* does not occur it is not the case that it is known that the *probans* occurs), we have a set of two fundamental requirements, namely 1) that the *probans* is known to occur in the *pakṣa* (=a) and 2) that it is known that *svabhāvapratibandha* obtains between *probans* and *probandum*. And it seems that the citation of examples assumes the role of securing that the old epistemic *Trairūpya*-conditions b) and/or c) are fulfilled.

If this is so, Dharmakīrti's theory has thereby achieved an important result. A doctrine which required knowledge of the instantiation of (one type of) *svabhāvapratibandha* instead of some variants among the epistemic *Trairūpya*-conditions I4 - I5* and I8 - I11* has severed the tight connection between knowledge of *avinābhāva*-propositions and "distributive" inductive support. It opened the way for allowing more indirect connections between knowledge of universal propositions of the form '(x)(Fx → Gx)' and any inductive basis. In principle this modification made it possible to provide for the same type of indirect connection as the one described in the preceding chapter by the example of a universal proposition to the effect that every instantiation of a certain height of the mercury-column of a thermometer is also an instantiation of a certain degree of temperature. The two qualitative properties might never have been observed previously, but the corresponding universal proposition can be credited with an inductive support because of the fact that it is derivable from an inductively supported quantitative hypothesis. In a similar manner Dharmakīrti's theory allows the possibility that a universal proposition of the form '(x)(Fx → Gx)' is based on knowledge of *svabhāvapratbandha*, which fulfills an analogous function as the quantitative hypothesis in the former case, which in its turn is based on inductive support.

This is an important achievement because it loosens the grip of the fetters of "distributive" inductive support. It is by itself in fact not yet sufficient in order to get entirely rid of these bonds because the threat remains that the restrictions are again imposed in a more indirect manner by the demand that the knowledge of *svabhāvapratibandha* has to be inductively supported by "distributive" facts. Nevertheless, Dharmakīrti appears to have undertaken some steps in the direction of loosening this grip too. The fulfillment of the requirement of previous knowledge of instances other than the *pakṣa* exhibiting the co-occurrence of *probans* and *probandum* was not any more indispensable. It was also necessary to drop this restriction in order to allow for inferences like the proof of universal momentariness. (If the *pakṣa* comprises all entities genuine exemplification outside the *pakṣa*-realm can not be reasonably demanded — and even if "non-reals" were allowed as exemplifying instances exemplification of co-occurrence outside the *pakṣa* is ruled out in the case of the *sattvānumāna*, on account of the nature of the *probans* "existence"). The fact that exemplification of positive concomitance became dispensable destroyed the basis for requirements like I4 — I5*. The invalidity of the second *Trairūpya*-condition in its epistemic form rendered the "realistic" *sapakṣa*-condition in the form of I14: '(∃x)((x ≠ p & Sx) & Hx)' also invalid. (The truth of

I13: '$(\exists x)(Sx \& Hx)$', on the other hand, would be guaranteed by the mere fact that the thesis to be proven is true). Because of this it should not come as a surprise if Dharmakīrti often inserts *eva* within formulations corresponding to the "classical" *sapakṣa*-condition and that his texts exhibit the tendency to treat the second and the third *Trairūpya*-conditions as variant formulations of the *avinābhāva*-relation.

Notwithstanding the fact that the doctrine of *svabhāvapratibandha* involved a decisive progress in several (though probably not in all) respects and can be credited with the merit of regaining freedom which had been lost by the restrictive conception of inference embodied in the classical *Trairūpya*-conditions, the fault of over-restrictedness has not been eliminated in Dharmakīrti's theory. Quite a lot of deficiencies remain. First of all, Dharmakīrti adopted from his tradition the prejudice that inferences from effects to causes are generally more safe than inferences from causes to effects. The circumstance that questions as to what the causes of certain phenomena are constitute one of the most frequent types of problems which are dealt with both in everyday life and in the sciences should suffice to evoke suspicion against any doctrine which claims that inferences of causes from effects are or can be safe. Dharmakīrti appears to have undertaken great efforts to substantiate the claim of the possibility of safe inferences from effects to causes by invoking the doctrine that different (types of) causes can never have the same (kinds of) effects or, the other way round, that effects of the same generic kind necessarily have causes of the same generic kind. His arguments offered for supporting this theorem are however far from being convincing and it seems that they can only achieve their aim by some kind of "modal fallacy", which consists in an unwarranted shift of the scope of a modal operator, as if one derives from a) 'It is necessary that every effect has some cause' the proposition b) 'Every effect has some cause necessarily'.

Another deficiency is that Dharmakīrti's theory has no room for probabilistic inferences. The issue is depicted in a way as if proper inference is always a matter of certainty and has to be thus. There is further no idea of empirical correlations of a non-causal and possibly "non-essential" nature like the one between average kinetic energy and temperature, where the knowledge of the pertinent correlations enables one to make derivations.[9] But an even more decisive defect is the circumstance that the foundations of Dharmakīrti's logical theory not only lack any explicit provision for quantitative hypotheses and inferences made on their basis but also contravene them. Even in the realm of cases where one could reasonably say

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[9] Since the notion of *svabhāvahetu* must not be restricted to cases of inferences which could also be classified as "analytical" there might be the possibility to explicate the notion of "own-essence" = *svabhāva* in such a way that it is not *a priori* ruled out to subsume these cases under the category of *svabhāvahetu*-inferences. Nevertheless, even then problems would remain because Dharmakīrti's notion of *svabhāva* appears to be very close to that of "essence" and to the idea that something cannot be what it in fact is if something else does not obtain. It is, however, far from clear that one is justified in saying that (a particular measure of) average kinetic energy could not be what it is, if it were not (a particular degree of) temperature or vice versa. At any rate, the concept of *svabhāva* would need a clarification and one would have to go far beyond Dharmakīrti's elucidation of this term in order to apply the notions of *svabhāva* and *svabhāvahetu* to cases of this sort.

that some quantitative states-of-affairs are causally related to some other states-of-affairs and if an extension of the notion of *tadutpatti* — "originating from that" — which allows the concept to apply to measures were granted, the problem remains that many inferences based on quantitative hypotheses clearly exhibit the provisional and fallible nature of inference, a circumstance which is contrary to the whole spirit of Dharmakīrti's theoretical outlook. Inferences which are in some way related to the notions of rule and convention pose a further problem for Dharmakīrti's theory. On the basis of the assumption that certain conventions are obeyed, it is possible to undertake derivations and make predictions which not seldom exhibit a considerably higher degree of certainty than the standard inference of fire from smoke. One can derive what possible meanings sentences possess if one knows the rules of a language and there are cases where it is possible to find out whether or not a winning strategy in some game exists whenever a particular situation is given; accordingly one can safely predict what a speaker will mean by uttering such and such a sentence or whether a player will win in such and such a situation if compliance with the rules of the language or the game or some amount of ingenuity can be taken for granted etc. Inferences of such kinds play an immensely important role both in everyday life and in the sciences and humanities. It is therefore legitimate to demand that any acceptable general epistemological theory should give an account of these cases.[10]

There are reasons to believe that the mentioned deficiencies are to a considerable extent due to the lack of natural sciences of the modern kind and to the relatively little relevance of fields of knowledge comparable to the humanities of our days. But it is also not an uninteresting question whether the epistemological doctrines of the Indian tradition blocked or obstructed the way to the development of "quantitative" natural sciences or to more methodologically conscious forms of hermeneutics. In any case, whether or not Indian epistemology in fact had obstructive effects there are a number of factors supporting the assumption that it was very well *suited* to play such a role.

Indian epistemology, as any epistemology, implied some kind of methodological theory. It is in the nature of any methodology to impose restrictions, because its very point lies in giving an account of what can be counted as warranted and what not. But it is dangerous to put methodological theory immediately into practice. Rather one needs regulations or even some other good theory telling us how to make proper use of theories of this kind (and theories in general). In particular it is imperative to be constantly aware of the danger that some methodological theory is too restrictive. A main source of this lies in the circumstance that the reflection first orientates itself on particular examples and draws the demarcation line between what is acceptable and what not on the background of these previously chosen examples. But an unbiased selection of the examples is difficult, if at all

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[10] It appears that these considerations are not invalidated by the fact that Dharmakīrti was able to extend the range of valid inferences by allowing for complex proofs in which both *tadutpatti-* and *tādātmya*-relations are involved. — A detailed description of such cases can be found in T. Iwata 1991:85-96.

possible. Limitations imposed by prejudice and historical tradition are too crucial in this connection. This also holds good for the history of Indian epistemology and the theory of inference. It seems that we can safely say — from our standpoint — that the scope was yet too narrow and therefore many theorems and postulates by far too restrictive.

Recognizing clearly in the case of a foreign philosophical tradition that it succumbed to too restrictive views regarding the nature of valid cognition and inference we could derive a "moral" from our investigations of the doctrine of *Trairūpya* and the connected epistemological theories so that our historical study might even yield a κτῆμα εἰς ἀεί. But we can also leave aside such pompous claims and confine ourselves to say that our investigation of this aspect of "Indian Logic" is suited to warn us against possible misuse of any attempts to elucidate things like the "nature of science" or the "essence of Wissenschaft". The relevance of this issue is not necessarily confined to theoretical issues but also affects practice because the consequences of our having particular ideas on "Wissenschaft" reach further by influencing our concepts of the "spirit of science" or, as some people call it, "Wissenschaftlichkeit". Since we can see that there is an inherent danger in converting concepts and definitions into norms on account of principal epistemological reasons even with respect to refined attempts at elucudating such ideas as they may be undertaken in the realm of the Philosophy of Science it is all the more imperative to adopt a critical attitude towards restrictive prescripts if they are based on unreflected and possibly even confused notions as they are popular among representatives of particular academic disciplines, like History, Indology etc. In order to promote a deeper entrenchment of the idea that even apparently well-founded considerations should never be allowed to shackle all our cognitive activities it might be useful to recall the fact that similar "elucidations" of the nature of art play a questionable role if they are employed to smother artistic practice.

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WZKM *Wiener Zeitschrift für die Kunde des Morgenlandes*. Wien.

WZKS *Wiener Zeitschrift für die Kunde Südasiens*. Wien.

WZKSO *Wiener Zeitschrift für die Kunde Süd- und Ostasiens*. Wien.

INDEX OF TERMS AND ABBREVIATIONS

INDEX OF NAMES

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